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ABSTRACT

The purpose of the units in the guide is to supplement, enrich, and reinforce the usual classroom instruction in seventh through ninth grade mathematics, and at the same time, introduce career education. The 14 resource units are not designed to be the primary teaching device for the math topics with which they deal. Each unit emphasizes an occupational setting (such as communications, industry, public services organizations, transportation industry, etc.) and a specific occupation within that setting. The purpose is to give students a chance to explore various business and office occupations while gaining insight into how and why a knowledge of mathematics is important in everyday work life. The resource units may be adapted to fit an individual school's special objectives; the units have been designed so that activities may be added or deleted. The first one or two pages of each unit gives the purpose, briefly describes the major activities, and suggests procedures. A general information sheet provides teachers with background information about the occupation described in the unit. Teacher's keys provide answers to a simulation activity and provide suggestions for related discussions. The student materials for the major activities are located at the end of each unit. (Author/AJ)

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BO-CEC

MATH RESOURCE GUIDE

GRADES 7-9

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BO-CEC

MATH
RESOURCE
GUIDE

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THIS GUIDE IS ONE OF THREE
BO-CEC JUNIOR HIGH CURRICULUM
GUIDES:

English Resource Guide
Math Resource Guide
Social Studies Resource Guide

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FOREWORD

The national Business and Office Career Education Curriculum project was funded for two years with Colorado State University by the Department of Health, Education, and Welfare to produce career education curriculum guides for middle and junior high schools. Other guides are being produced for K-6 grades and the secondary and post-secondary programs. The project monitor, representing the Department of Health, Education, and Welfare, is James H. Wykle.

Drafts of three guides have been prepared for middle and junior high schools: English Resource Guide, Math Resource Guide, and Social Studies Resource Guide.

The purpose of the units in each of the guides is to supplement, enrich and re-enforce the usual classroom instruction in English, mathematics, and social studies, and at the same time, introduce career education. Teachers are urged to add and delete activities or make any adaptations in the various units which will make them more effective in individual classrooms.

During the 1974-75 school year, the guides were made available to the following test sites for limited dissemination: Fulton County Georgia; Detroit, Michigan; East Detroit, Michigan; Western Michigan University, Kalamazoo; New Orleans, Louisiana; Plainfield, New Jersey; San Diego, California; Freemont, California; Sidney, Nebraska; Pueblo, Colorado; Cortez, Colorado; and Fort Collins, Colorado.

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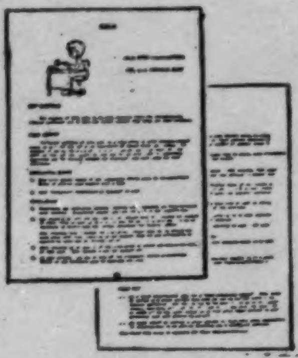
HOW TO USE THE BO-CEC UNITS

The units in the BO-CEC Math Resource Guide are designed to supplement, rather than replace, your regular instructional materials. The activities in these units are therefore enrichment materials that you can use as re-enforcement exercises after you have taught regular Mathematics units. The features of the BO-CEC Resource Guides that you should keep in mind are:

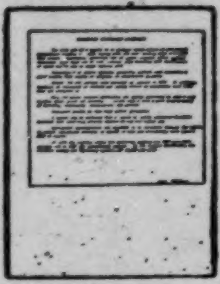
> *The resource units are to serve only as supplements to your regular math units.* The resource units were not designed to be the primary teaching device for the math topics with which they deal.
>
> *Each unit emphasizes an occupational setting (such as communications industry, public services organizations, transportation industry, etc.) and a specific occupation within that setting.* The purpose of the BO-CEC resource guides is to give students a chance to *explore* various *business and office occupations* while gaining insight into how and why a knowledge of mathematics is important in everyday work life.
>
> *The resource units may be adapted to fit your special objectives.* Because the units were developed for nationwide distribution, individual schools or school systems may need to modify the units to fit their local needs and objectives. Thus, the units have been designed so that activities may be added or deleted. *Local business and office teachers/coordinators can help you adapt any unit that does not meet your objectives. They can also help you develop additional career-related activities or units.*

ORGANIZATION OF MATH UNITS



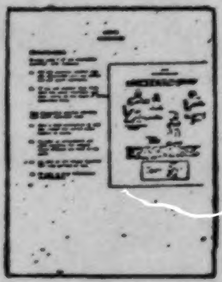
PURPOSE

The first one or two pages of each unit gives the *purpose*, briefly described the *major activities*, and suggests *procedures* to be followed *before class begins and during class.*



GENERAL INFORMATION

The *General Information or Background Information* sheet provides teachers with information about the occupation described in the unit.



TEACHER'S KEYS

Teacher's Keys follow the General or Background Information sheet. Each key provides answers or suggested answers to a simulation activity. Each key also provides suggestions for discussions related to the simulation activity.

STUDENT MATERIALS

The student materials for the major activities are located at the end of each unit and are printed on white paper so that they can be reproduced easily.

MATH RESOURCE GUIDE OUTLINE

UNIT	TOPIC	OCCUPATION	SETTING	CLUSTER
1 Page 1	Addition and Subtraction	Accountant	Boating Club	Recreation and Hospitality
2 Page 28	Addition and Subtraction	Accounting Clerk	Boating Club	Recreation and Hospitality
3 Page 54	Add'n, Sub'n & Multiplication	Cashier	Restuarant	Recreation and Hospitality
4 Page 77	Multiplication	Business Manager	Record Shop	Marketing and Distribution
5 Page 92	Division	Property Accountant	Ambulance Service Co.	Medical Services
6 Page 118	Fractions	Payroll Accountant	Airline Office	Transportation
7 Page 133	Ratios and Proportions	Inventory Control Clerk	Sporting Goods Company	Marketing and Distribution
8 Page 148	Percentages and Interest	Secretary	Construction Company	Construction
9 Page 163	Metric Measurements	Hospital Ward Clerk	Hospital	Health Occupations
10 Page 188	Geometry	Small Business Owner	Truck Farm	Agriculture
11 Page 203	Broken Line Graphs	Administrative Assistant	Environmental Protection Agy.	Environmental
12 Page 223	Metric Measurements	Information Specialist	Chamber of Commerce	Public Service
13 Page 244	Equations	Owner-Manager	Dry Cleaning Shop	Personal Services
14 Page 269	Measures of Central Tendency	Personnel Officer	Automobile Manufacturer	Manufacturing

UNIT 1

HOW AN ACCOUNTANT IN THE RECREATION - HOSPITALITY INDUSTRY USES ADDITION AND SUBTRACTION ON THE JOB

PURPOSE:

This unit introduces students to the job of an accountant in an industry setting and gives them an opportunity to practice skills in adding and subtracting whole numbers while completing some of the reports which an accountant prepares at regular intervals.

MAJOR ACTIVITIES:

While working through the activities of this unit, students will complete some of the forms used by Ann Jackson, an accountant and office supervisor for the Southern Pacific Boating Club.

Before Class Begins:

1. Duplicate and assemble enough copies of the student simulation packet (pages 15-25) to provide each student with a set. Duplicate and include pages 26 and 27 in these sets only if you want your students to work through the optional activities which are described on the following page.
2. Read the "General Information About the Accounting Profession," which is on page 3; then scan the Keys to each of the student activities which follow.

During Class:

1. Distribute the simulation packets; read and discuss the introductory pages (15 and 16) with students.
2. Ask students to complete the activities on pages 17 through 25. While they are busy with their tasks, you may wish to read through all of the information on the Keys, which begin on page 4.

During Class: (Cont'd)

3. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the Keys to each of the activities.

4. If there is time and if there is student interest, duplicate the forms on pages 26 and 27; then have students work through the first two activities which are described in the following section.

OPTIONAL ACTIVITIES:

1. Preparing a Personal Income Statement:

   Students are to use the form on page 26 to compute Net Income. For specific suggestions as to how to help them with this activity, please refer to the Key on page 13.

2. Computing Personal Net Worth:

   Have students use the form on page 27. Directions and a sample of a completed form are on page 14.

3. Class Discussion:

   The above two activities may be followed by a class discussion as to why it is important to know how much income one receives--within a given time period--and how much one spends. You may also want students to discuss why a businessman would want to know the net worth of his firm.

4. Guest Speaker:

   Invite an accountant, an accounting clerk, or someone who holds a related job to speak to your class on how mathematics is used in daily business activities. If a parent works in the accounting department of some business or organization, consider asking this person to be the first speaker. *For an interesting and effective variation of this activity, please refer to the information in Appendix C, "Guidelines for Conducting Interviews" and "Sample Interview Guide".*

GENERAL INFORMATION ABOUT THE ACCOUNTING PROFESSION

The person who prepares the financial records and reports of a business and who analyzes and interprets these records for the purpose of giving advice to business owners is usually referred to as an accountant.

A few of the responsibilities of an accountant are described in this unit. As the student completes the forms which are included in his packet, he will apply basic arithmetic skills as he determines gross income, net income, total assets, total liabilities, and the net worth of the Southern Pacific Boating Club. This type of information enables any business owner to determine if he is making a gain or profit from the operations of his firm, or if he is suffering a loss.

The opportunities in accounting are multiple. Those who are trained in this field may elect to work for private business firms, government agencies, or for institutions such as hospitals and schools. Some accountants choose to be independent practitioners (public accountants) and, for a fee, will offer such services to business enterprises as income tax preparation, auditing (examining and analyzing records), the designing of an appropriate accounting system, and giving financial advice.

Within this field, there are opportunities for both lateral and **vertical** *moves. With expertise as to the financial affairs of a business, an accountant may move into a managerial position; or he may enter into one of the 100 or more specialized areas such as cost accounting, budgeting and control, internal auditing, and information processing.*

The employment outlook for accountants is expected to be excellent for a number of years. Working conditions are quite good, and salaries compare favorably with those paid to other professional people.

Training and Special Skills Required:

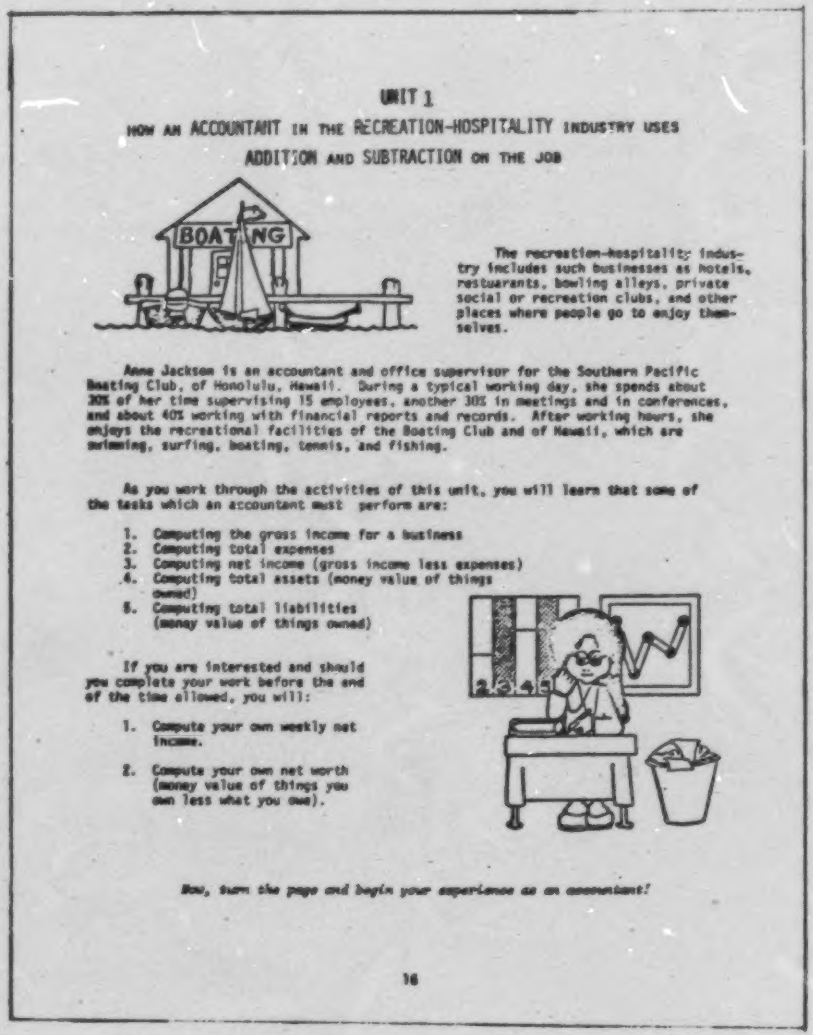
Although some accountants receive training from private business or correspondence schools, many firms require that their candidates hold a bachelor's degree with a major in accounting. A growing number of business organizations prefer accountants who hold a master's degree in accounting and who have had college training in related business subjects. Accountants who wish to earn the CPA (Certified Public Accountant) designation, must be college graduates, must have had practical experience in the field,and must pass a rigorous examination administered by the American Institute of Certified Accountants.

Accountants must enjoy working with numbers and doing detailed work. They need to be able to communicate well, both verbally and in writing; and, because of the many deadlines imposed by the government and other agencies in matters concerning financial reporting, they must be able to work under considerable pressure.

KEY - UNIT 1

HOW AN ACCOUNTANT IN THE RECREATION-HOSPITALITY INDUSTRY USES ADDITION AND SUBTRACTION ON THE JOB

Introductory Page of Student Packet:



UNIT 1

HOW AN ACCOUNTANT IN THE RECREATION-HOSPITALITY INDUSTRY USES ADDITION AND SUBTRACTION ON THE JOB

The recreation-hospitality industry includes such businesses as hotels, restuarants, bowling alleys, private social or recreation clubs, and other places where people go to enjoy themselves.

Anne Jackson is an accountant and office supervisor for the Southern Pacific Boating Club, of Honolulu, Hawaii. During a typical working day, she spends about 30% of her time supervising 15 employees, another 30% in meetings and in conferences, and about 40% working with financial reports and records. After working hours, she enjoys the recreational facilities of the Boating Club and of Hawaii, which are swimming, surfing, boating, tennis, and fishing.

As you work through the activities of this unit, you will learn that some of the tasks which an accountant must perform are:

1. Computing the gross income for a business
2. Computing total expenses
3. Computing net income (gross income less expenses)
4. Computing total assets (money value of things owned)
5. Computing total liabilities (money value of things owned)

If you are interested and should you complete your work before the end of the time allowed, you will:

1. Compute your own weekly net income.
2. Compute your own net worth (money value of things you own less what you owe).

Now, turn the page and begin your experience as an accountant!

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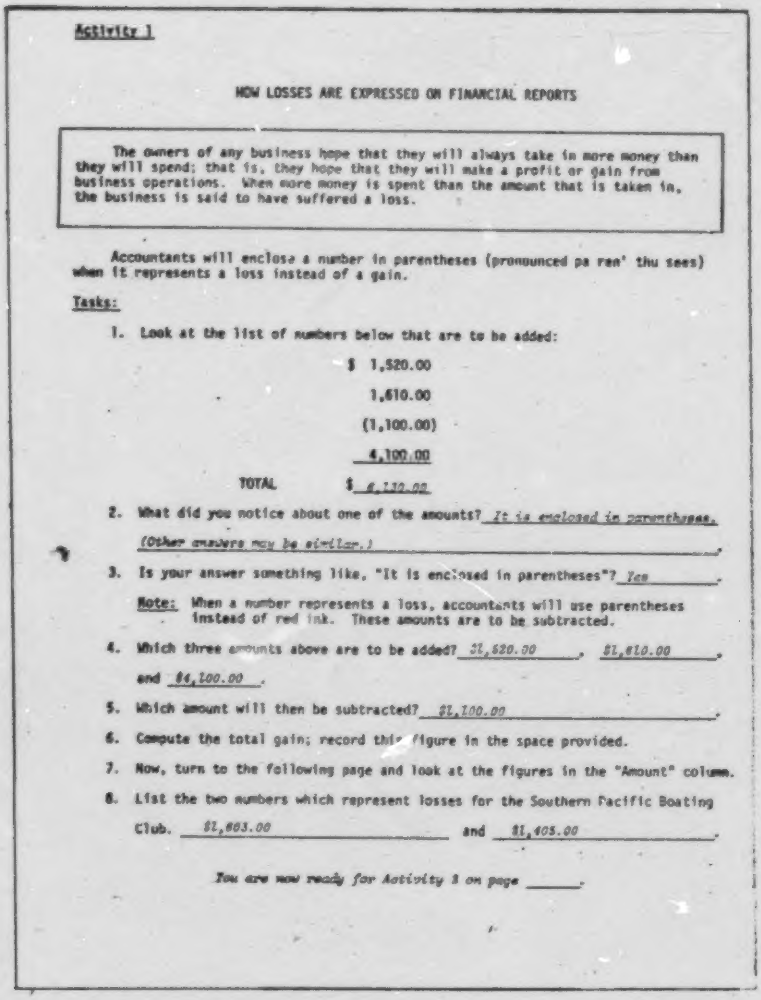
As you have your students discuss the information on this page, you may want to:

1. Call attention to the description of the industry setting in which Ann Jackson works.
2. Have students discuss some of the reasons why anyone would want to work within the recreation-hospitality industry setting. (Please note Ann Jackson's activities after working hours.)
3. Should students have questions, supplement the information on this introductory page with some of the items mentioned on page 3, "General Information about the Accounting Profession."
4. If some of your students are acquainted with people who are accountants, ask them to describe some of the tasks performed by these people and to mention the industry setting in which the accountants work.

KEY - UNIT 1

HOW ACCOUNTANTS USE PARENTHESES TO EXPRESS LOSSES

Activity 1:



Activity 1

HOW LOSSES ARE EXPRESSED ON FINANCIAL REPORTS

The owners of any business hope that they will always take in more money than they will spend; that is, they hope that they will make a profit or gain from business operations. When more money is spent than the amount that is taken in, the business is said to have suffered a loss.

Accountants will enclose a number in parentheses (pronounced pa ren' thu sees) when it represents a loss instead of a gain.

Tasks:

1. Look at the list of numbers below that are to be added:

	$ 1,520.00
	1,610.00
	(1,100.00)
	4,100.00
TOTAL	$ *6,130.00*

2. What did you notice about one of the amounts? *It is enclosed in parentheses. (Other answers may be similar.)*
3. Is your answer something like, "It is enclosed in parentheses"? *Yes* .

   Note: When a number represents a loss, accountants will use parentheses instead of red ink. These amounts are to be subtracted.
4. Which three amounts above are to be added? *$1,520.00* , *$1,610.00* , and *$4,100.00* .
5. Which amount will then be subtracted? *$1,100.00* .
6. Compute the total gain; record this figure in the space provided.
7. Now, turn to the following page and look at the figures in the "Amount" column.
8. List the two numbers which represent losses for the Southern Pacific Boating Club. *$1,603.00* and *$1,405.00* .

You are now ready for Activity 2 on page ______.

This activity introduces students to a method of expressing losses on financial statements, and it provides them with practice in adding a column of figures in which losses are indicated.

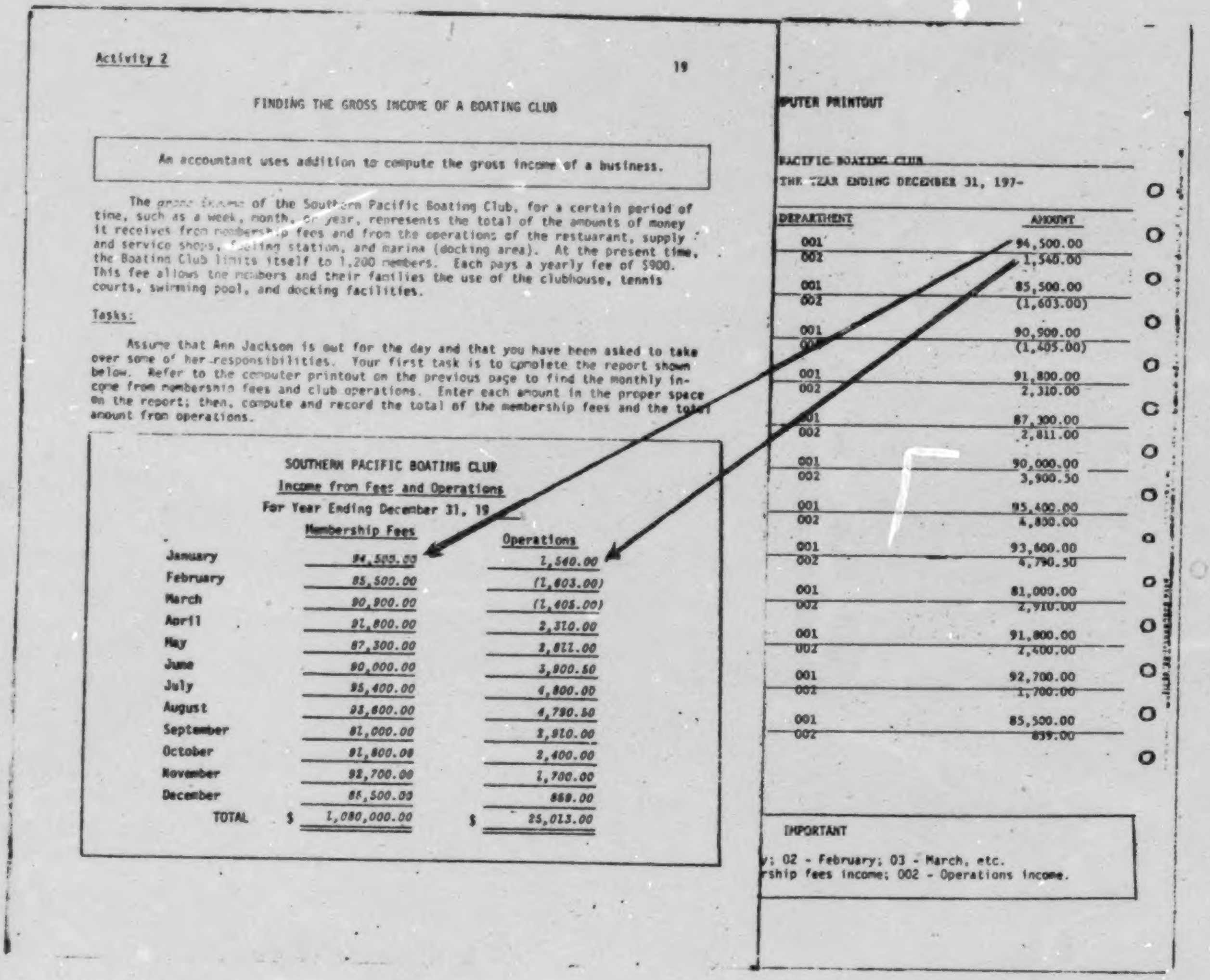
To solve the problem, students should first find the total of all amounts not enclosed in parentheses. ($1,520 + $1,610 + $4,200 = $7,330). Then, they must subtract the total of any amounts which are enclosed in parentheses. ($7,300 - $1,100 = $6,230).

The correct answers to Question 8, $1,603 and $1,405, should alert students to the two numbers which are to be subtracted as they work through Activity 2, of this Unit.

KEY - UNIT 1

FINDING THE GROSS INCOME OF A BOATING CLUB

Activity 2:



Activity 2

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FINDING THE GROSS INCOME OF A BOATING CLUB

An accountant uses addition to compute the gross income of a business.

The gross income of the Southern Pacific Boating Club, for a certain period of time, such as a week, month, or year, represents the total of the amounts of money it receives from membership fees and from the operations of the restuarant, supply and service shops, fueling station, and marina (docking area). At the present time, the Boating Club limits itself to 1,200 members. Each pays a yearly fee of $900. This fee allows the members and their families the use of the clubhouse, tennis courts, swimming pool, and docking facilities.

Tasks:

Assume that Ann Jackson is out for the day and that you have been asked to take over some of her responsibilities. Your first task is to complete the report shown below. Refer to the computer printout on the previous page to find the monthly income from membership fees and club operations. Enter each amount in the proper space on the report; then, compute and record the total of the membership fees and the total amount from operations.

SOUTHERN PACIFIC BOATING CLUB

Income from Fees and Operations

For Year Ending December 31, 19__

	Membership Fees	Operations
January	94,500.00	1,540.00
February	85,500.00	(1,603.00)
March	90,900.00	(1,405.00)
April	91,800.00	2,310.00
May	87,300.00	2,811.00
June	90,000.00	3,900.50
July	95,400.00	4,800.00
August	93,600.00	4,790.50
September	81,000.00	2,910.00
October	91,800.00	2,400.00
November	92,700.00	1,700.00
December	85,500.00	859.00
TOTAL	$ 1,080,000.00	$ 25,013.00

```
PUTER PRINTOUT

PACIFIC BOATING CLUB
THE YEAR ENDING DECEMBER 31, 197-

DEPARTMENT                     AMOUNT
   001                      94,500.00
   002                       1,540.00

   001                      85,500.00
   002                     (1,603.00)

   001                      90,900.00
   002                     (1,405.00)

   001                      91,800.00
   002                       2,310.00

   001                      87,300.00
   002                       2,811.00

   001                      90,000.00
   002                       3,900.50

   001                      95,400.00
   002                       4,800.00

   001                      93,600.00
   002                       4,790.50

   001                      81,000.00
   002                       2,910.00

   001                      91,800.00
   002                       2,400.00

   001                      92,700.00
   002                       1,700.00

   001                      85,500.00
   002                         859.00

 IMPORTANT

y; 02 - February; 03 - March, etc.
rship fees income; 002 - Operations income.
```

You may want to have your students discuss the meanings of the terms, "gross income" and "operations", as they are used in the first paragraph on Page 3. They should note that expenses are not considered here and that the Club does realize an income from operating the restuarant, fueling station, etc.

To complete the first part of Activity 2, students must:

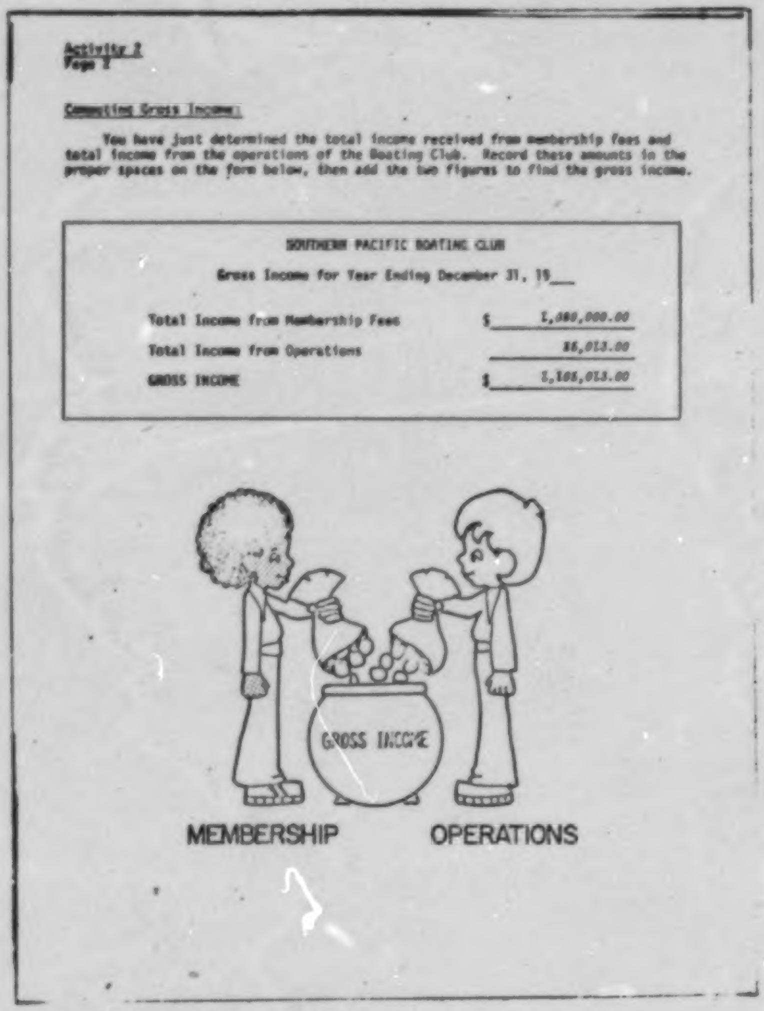
1. Transfer all figures from the Computer Printout to the Income Statement on the fourth page of their packets.

2. Total the two columns of figures. If necessary, students should be reminded that the two figures enclosed in parentheses represent losses for the Boating Club and must be subtracted.

KEY - UNIT 1

FINDING THE GROSS INCOME OF A BOATING CLUB

Activity 2, Page 2:



Activity 2
Page 2

Computing Gross Income:

You have just determined the total income received from membership fees and total income from the operations of the Boating Club. Record these amounts in the proper spaces on the form below, then add the two figures to find the gross income.

SOUTHERN PACIFIC BOATING CLUB

Gross Income for Year Ending December 31, 19__

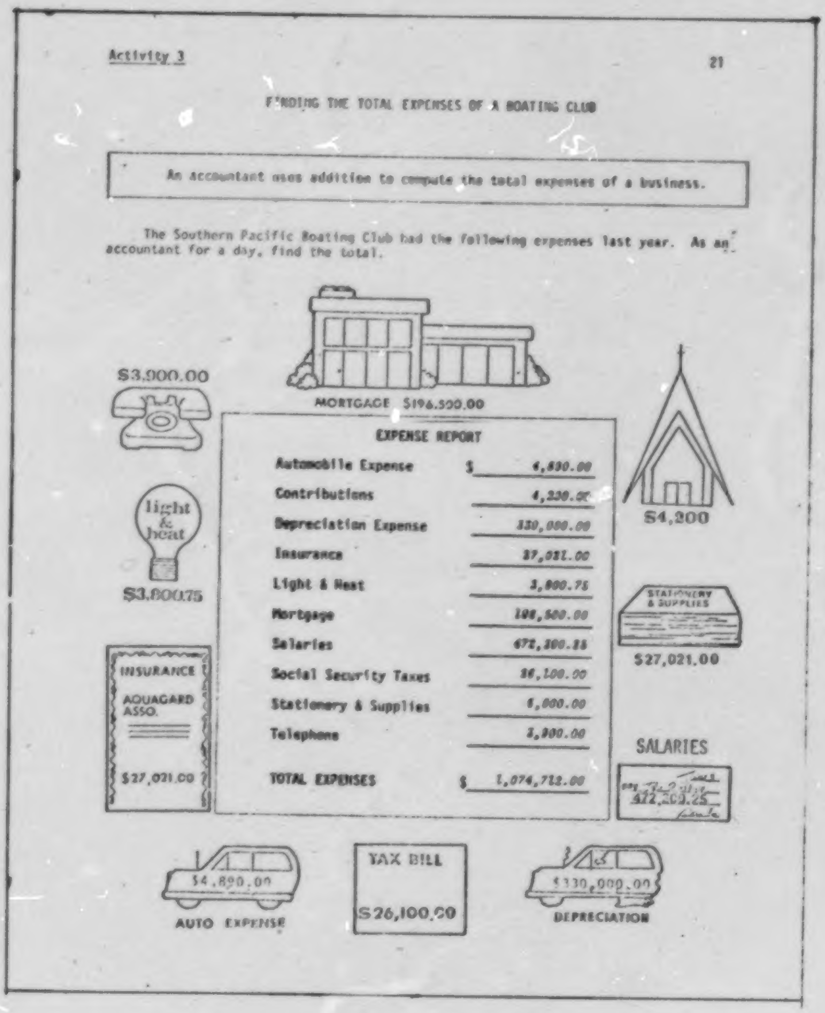
Total Income from Membership Fees $ 1,080,000.00
Total Income from Operations 86,013.00
GROSS INCOME $ 1,166,013.00

To complete the second part of Activity 2, students must first refer to the previous sheet and transfer the totals of the two columns to the appropriate spaces on the form illustrated above. The two amounts are then added to obtain the Gross Income for the year.

KEY - UNIT 1

FINDING THE TOTAL EXPENSES OF A BOATING CLUB

Activity 3:



Activity 3 21

FINDING THE TOTAL EXPENSES OF A BOATING CLUB

An accountant uses addition to compute the total expenses of a business.

The Southern Pacific Boating Club had the following expenses last year. As an accountant for a day, find the total.

MORTGAGE $196.500.00

$3.900.00

light & heat

$3.600.75

INSURANCE

AQUAGARD ASSO.

$27,021.00

$4,200

STATIONERY & SUPPLIES

$27,021.00

SALARIES

472,300.25

$4,890.00

AUTO EXPENSE

TAX BILL

$26,100.00

$330,000.00

DEPRECIATION

EXPENSE REPORT

Automobile Expense	$ 4,890.00
Contributions	4,200.00
Depreciation Expense	330,000.00
Insurance	27,021.00
Light & Heat	3,600.75
Mortgage	196,500.00
Salaries	472,300.25
Social Security Taxes	26,100.00
Stationery & Supplies	6,000.00
Telephone	3,900.00
TOTAL EXPENSES	$ 1,074,712.00

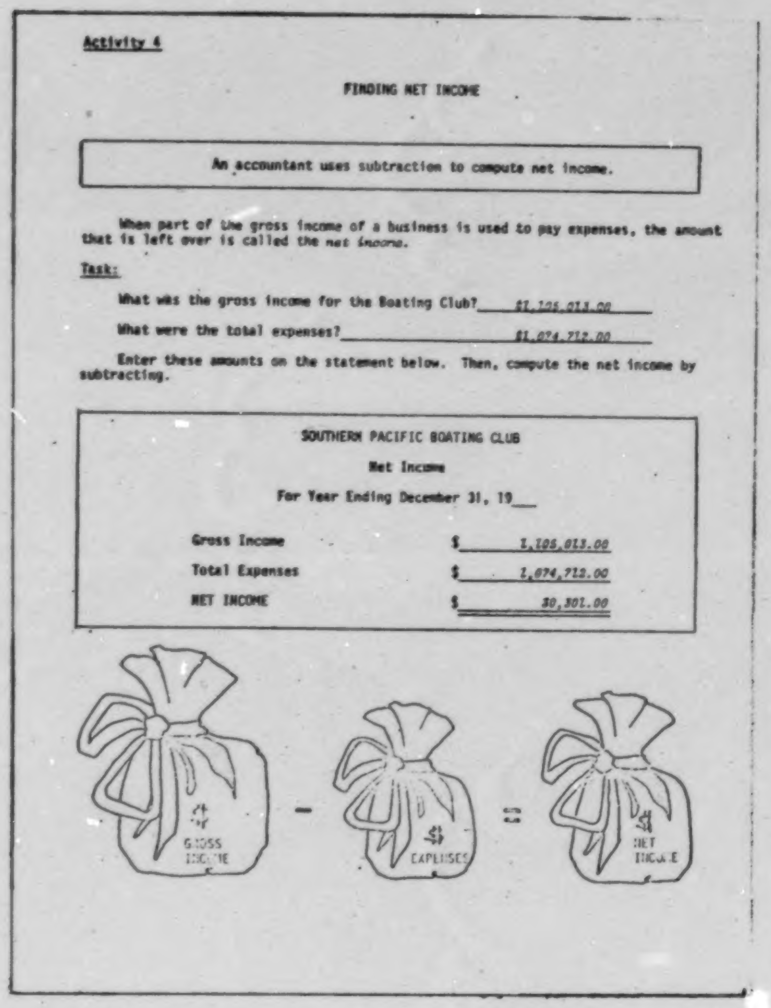
Individual expenses are listed in the figures which surround the report shown on this sheet. Also, there are brief definitions for two of the terms used. You may want to further explain the term, "depreciation", by saying that it represents a decline in the money value of the facilities and equipment which the Boating Club owns because of wear, tear, and obsolescence.

Students are to transfer the amounts shown in the figures to the spaces provided on the Expense Report. These individual amounts are then added to determine Total Expenses for the year.

KEY - UNIT 1

FINDING NET INCOME

Activity 4:



Activity 4

FINDING NET INCOME

An accountant uses subtraction to compute net income.

When part of the gross income of a business is used to pay expenses, the amount that is left over is called the *net income.*

Task:

What was the gross income for the Boating Club? *$1,105,013.00*

What were the total expenses? *$1,074,712.00*

Enter these amounts on the statement below. Then, compute the net income by subtracting.

SOUTHERN PACIFIC BOATING CLUB

Net Income

For Year Ending December 31, 19___

Gross Income	$ *1,105,013.00*
Total Expenses	$ *1,074,712.00*
NET INCOME	$ *30,301.00*

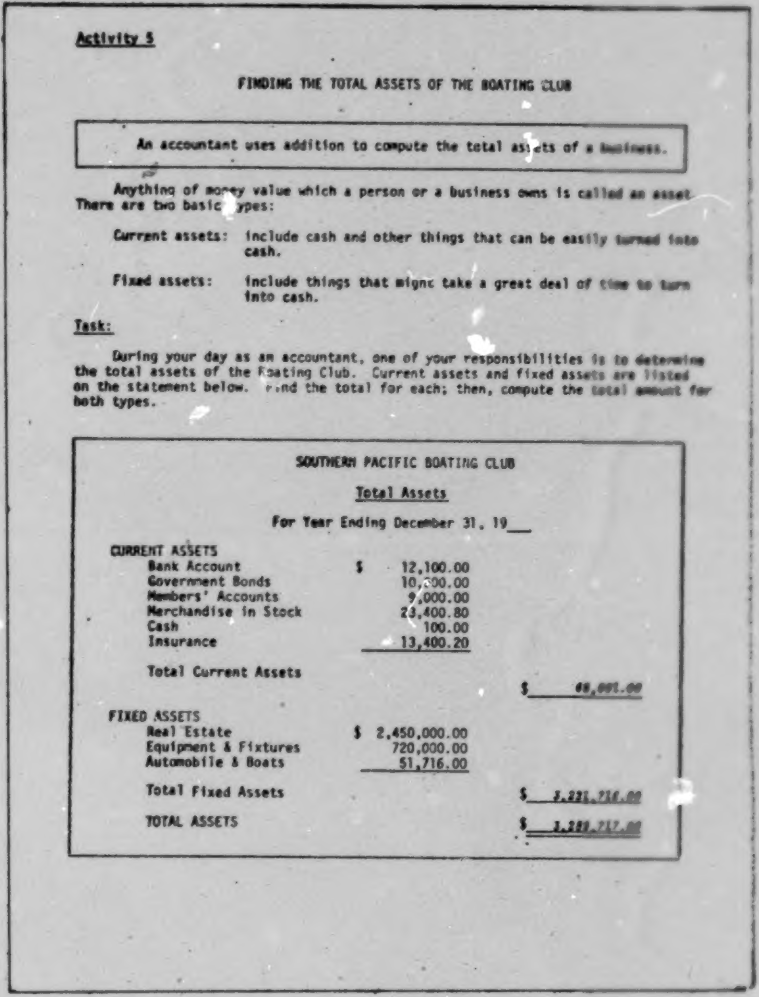
The form shown on this sheet is an abbreviated Income Statement for the Southern Pacific Boating Club.

Your students must first enter the gross Income and Total Expense figures that they computed while working through Activities 2 and 3. They should then subtract to find the Net Income.

KEY - UNIT 1

FINDING THE TOTAL ASSETS OF THE BOATING CLUB

Activity 5:



Activity 5

FINDING THE TOTAL ASSETS OF THE BOATING CLUB

> An accountant uses addition to compute the total assets of a business.

Anything of money value which a person or a business owns is called an asset. There are two basic types:

Current assets:	include cash and other things that can be easily turned into cash.
Fixed assets:	include things that might take a great deal of time to turn into cash.

Task:

During your day as an accountant, one of your responsibilities is to determine the total assets of the Boating Club. Current assets and fixed assets are listed on the statement below. Find the total for each; then, compute the total amount for both types.

SOUTHERN PACIFIC BOATING CLUB

Total Assets

For Year Ending December 31, 19___

CURRENT ASSETS		
Bank Account	$ 12,100.00	
Government Bonds	10,000.00	
Members' Accounts	9,000.00	
Merchandise in Stock	23,400.80	
Cash	100.00	
Insurance	13,400.20	
Total Current Assets		$ 68,001.00
FIXED ASSETS		
Real Estate	$ 2,450,000.00	
Equipment & Fixtures	720,000.00	
Automobile & Boats	51,716.00	
Total Fixed Assets		$ 3,221,716.00
TOTAL ASSETS		$ 3,289,717.00

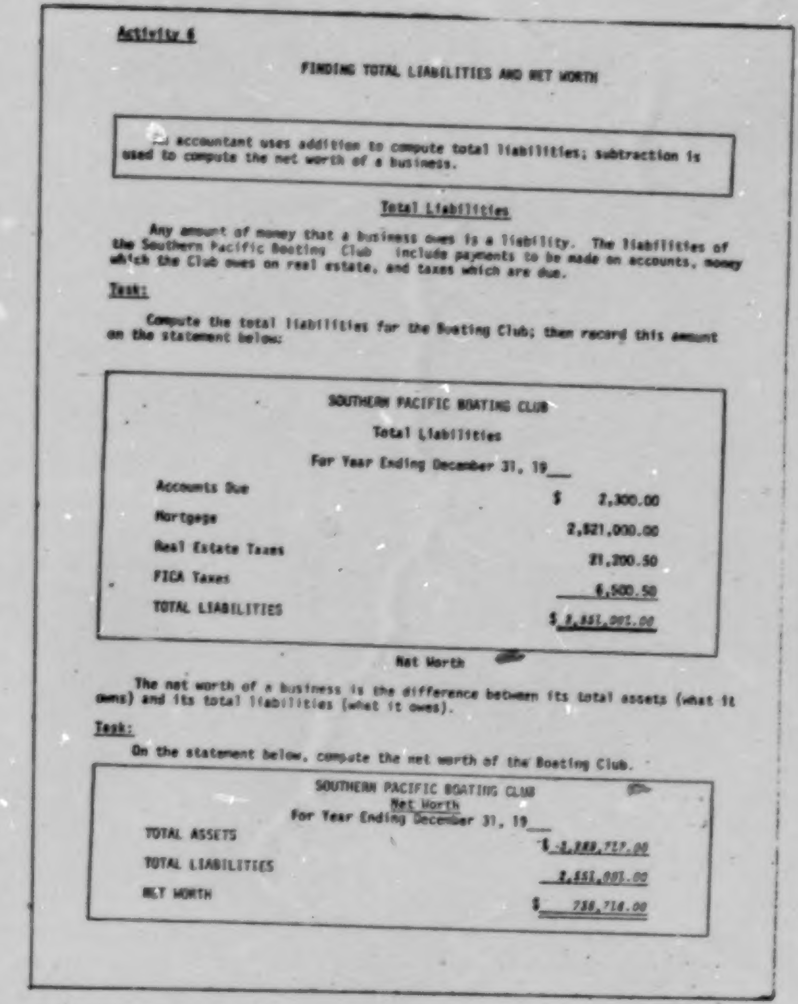
On this sheet, your students will compute the Total Assets, or the total money value of all things owned by the Southern Pacific Boating Club.

After checking answers with students, you may want to explain three of the items listed under "Current Assets": The $9,000 figure for "Members' Accounts" represents money the Boating Club expects to receive from its members; the $23,400.80 figure represents the money value of all merchandise on shelves and in storage areas; and the $13,400.20 figure represents an unused portion of an insurance premium.

KEY - UNIT 1

FINDING TOTAL LIABILITIES AND NET WORTH

Activity 6:



Activity 6

FINDING TOTAL LIABILITIES AND NET WORTH

An accountant uses addition to compute total liabilities; subtraction is used to compute the net worth of a business.

Total Liabilities

Any amount of money that a business owes is a liability. The liabilities of the Southern Pacific Boating Club include payments to be made on accounts, money which the Club owes on real estate, and taxes which are due.

Task:

Compute the total liabilities for the Boating Club; then record this amount on the statement below:

SOUTHERN PACIFIC BOATING CLUB
Total Liabilities
For Year Ending December 31, 19__

Accounts Due	$ 2,300.00
Mortgage	2,821,000.00
Real Estate Taxes	21,200.50
FICA Taxes	6,500.50
TOTAL LIABILITIES	$ 2,851,001.00

Net Worth

The net worth of a business is the difference between its total assets (what it owns) and its total liabilities (what it owes).

Task:

On the statement below, compute the net worth of the Boating Club.

SOUTHERN PACIFIC BOATING CLUB
Net Worth
For Year Ending December 31, 19__

TOTAL ASSETS	$ 3,589,717.00
TOTAL LIABILITIES	2,851,001.00
NET WORTH	$ 738,716.00

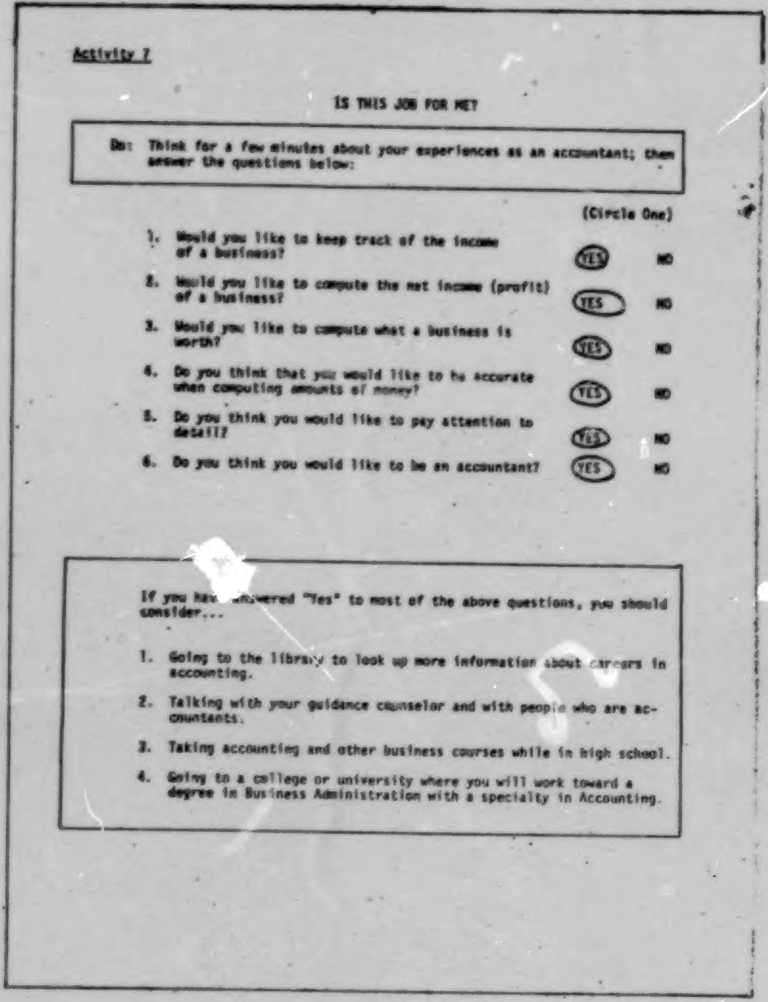
Your students will use the two forms on this sheet to compute the "Net Worth" of the Southern Pacific Boating Club. For a business, this term is used to represent the difference between its total assets (what it owns) and its total liabilities (what it owes).

On the first form, students must add the list of figures to determine Total Liabilities. On the first line on the second form, they should enter Total Assets for the Boating Club which they found while completing Activity 6. The total of the Liabilities must be entered on the second line, and Net Worth found by subtracting.

KEY - UNIT 1

IS THIS JOB FOR ME?

Activity 7:



Activity 7

IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as an accountant; then answer the questions below:

	(Circle One)	
1. Would you like to keep track of the income of a business?	[✓ YES]	NO
2. Would you like to compute the net income (profit) of a business?	[✓ YES]	NO
3. Would you like to compute what a business is worth?	[✓ YES]	NO
4. Do you think that you would like to be accurate when computing amounts of money?	[✓ YES]	NO
5. Do you think you would like to pay attention to detail?	[✓ YES]	NO
6. Do you think you would like to be an accountant?	[✓ YES]	NO

If you have answered "Yes" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are accountants.
3. Taking accounting and other business courses while in high school.
4. Going to a college or university where you will work toward a degree in Business Administration with a specialty in Accounting.

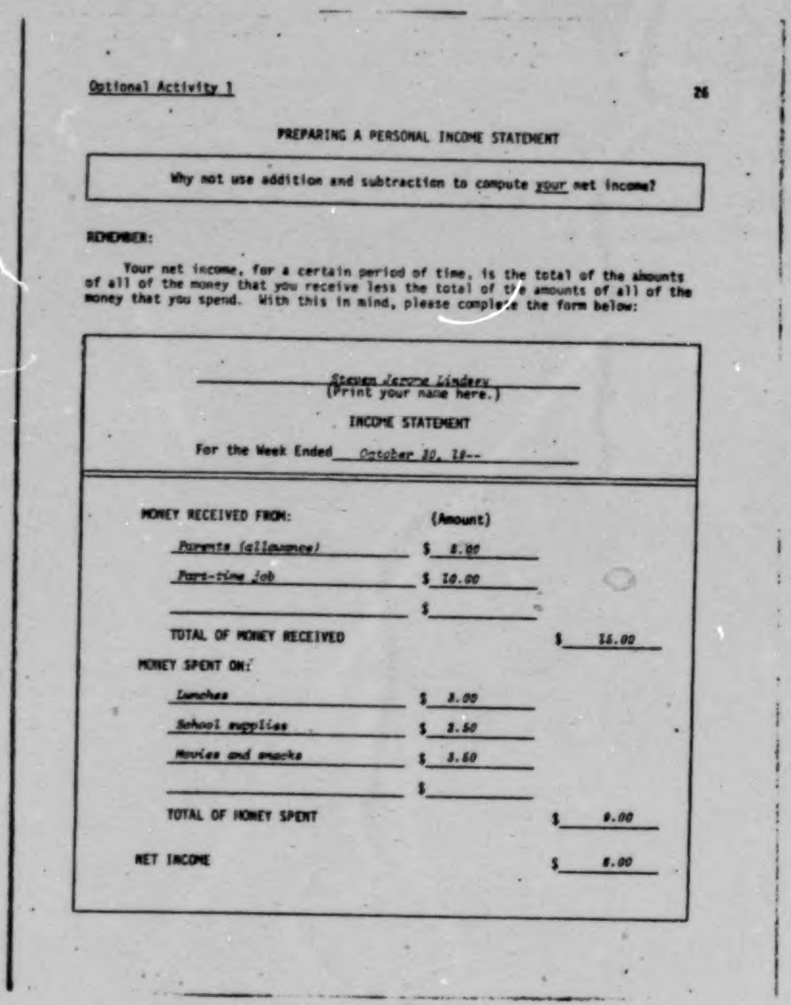
Individual student responses to the questions on this sheet will vary; however, after such a brief exposure, it should not be expected that all will show a strong preference for the field of accounting.

Call attention to the activities listed in the second "box" on this sheet and encourage interested students to seek more information by going to the sources mentioned in the first two statements.

KEY - UNIT 1

PREPARING A PERSONAL INCOME STATEMENT

Optional Activity 1:



Optional Activity 1 26

PREPARING A PERSONAL INCOME STATEMENT

Why not use addition and subtraction to compute your net income?

REMEMBER:

Your net income, for a certain period of time, is the total of the amounts of all of the money that you receive less the total of the amounts of all of the money that you spend. With this in mind, please complete the form below:

Steven Jerome Lindsey
(Print your name here.)

INCOME STATEMENT

For the Week Ended *October 10, 19--*

MONEY RECEIVED FROM:	(Amount)	
Parents (allowance)	$ *8.00*	
Part-time job	$ *10.00*	
	$	
TOTAL OF MONEY RECEIVED		$ *18.00*
MONEY SPENT ON:		
Lunches	$ *3.00*	
School supplies	$ *2.50*	
Movies and snacks	$ *3.50*	
	$	
TOTAL OF MONEY SPENT		$ *9.00*
NET INCOME		$ *9.00*

This activity and the one which follows will give students an opportunity to apply business practices to personal circumstances.

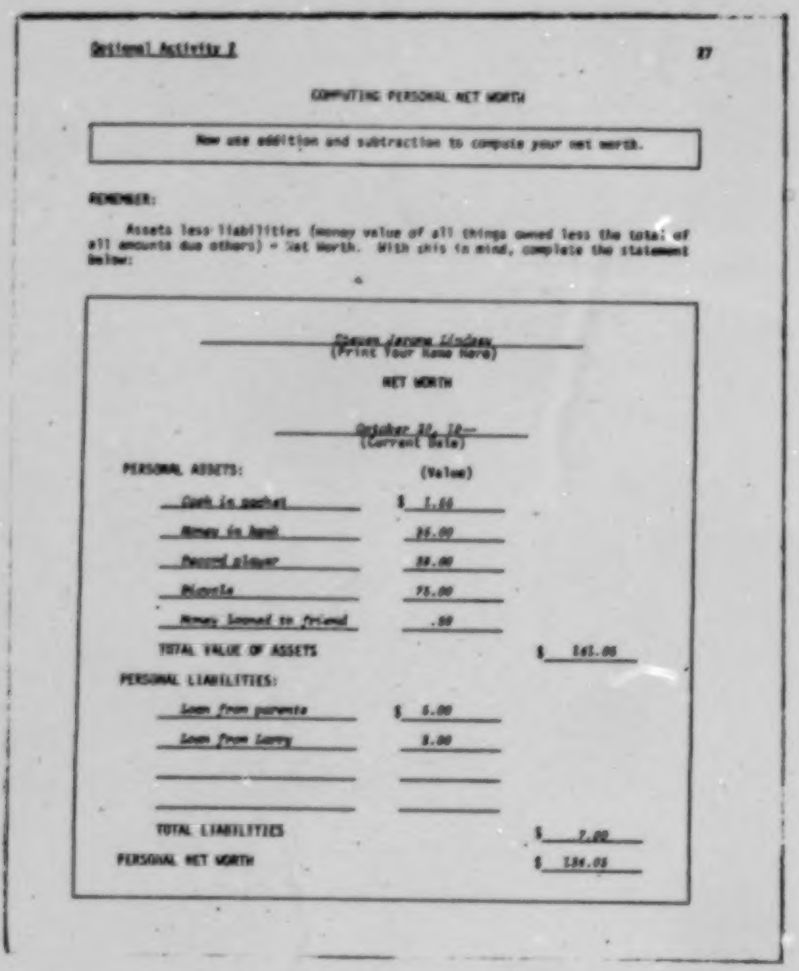
The form pictured above is a sample as to how a personal income statement may be completed. Should your students need to list more items in Income and Expense sections, you may suggest that they construct a form on a separate sheet of paper.

If there is time, you may want your students to spend a few minutes discussing why individuals should be as concerned as business as to where money comes from and where it goes.

KEY - UNIT 1

COMPUTING PERSONAL NET WORTH

Optional Activity 2:



Optional Activity 2

COMPUTING PERSONAL NET WORTH

Now use addition and subtraction to compute your net worth.

REMEMBER:

Assets less liabilities (money value of all things owned less the total of all amounts due others) = Net Worth. With this in mind, complete the statement below:

[illegible]
(Print Your Name Here)

NET WORTH

[illegible]
(Current Date)

PERSONAL ASSETS: (Value)

Cash in pocket	$ [illegible]	
Money in bank	[illegible]	
Record player	[illegible]	
Bicycle	75.00	
Money loaned to friend	[illegible]	
TOTAL VALUE OF ASSETS		$ [illegible]

PERSONAL LIABILITIES:

Loan from parents	$ [illegible]	
Loan from Larry	[illegible]	
TOTAL LIABILITIES		$ 7.00
PERSONAL NET WORTH		$ [illegible]

Statements written on these sheets will vary according to individual circumstances. The above is a sample as to how personal net worth may be computed.

Please note that the assets listed on this sample form are those over which the student has considerable control. Apparel and similar items are not listed, although they could be.

Please note, also, the last item listed under "Assets". Ask your students if they have listed, under this heading, any amounts of money which they have loaned to a friend or relative. You may want to explain that money loaned is still an asset, even though it is temporarily being used by someone else.

SECTION A

HOW BASIC MATHEMATICAL COMPUTATIONS ARE USED IN BUSINESS

A large number of people who hold jobs in business use basic mathematical computations as they complete many of their daily tasks. For example....

An accountant uses basic computations when completing financial reports

A payroll clerk must compute total hours and wages earned.

Most of the work of a cashier involves addition, subtraction, and multiplication.

As you read through the information in this section, you will find that basic computational skills are important to the work of everyone who works in the world of business.

UNIT 1

HOW AN ACCOUNTANT IN THE RECREATION-HOSPITALITY INDUSTRY USES ADDITION AND SUBTRACTION ON THE JOB

The recreation-hospitality industry includes such businesses as hotels, restuarants, bowling alleys, private social or recreation clubs, and other places where people go to enjoy themselves.

Anne Jackson is an accountant and office supervisor for the Southern Pacific Boating Club, of Honolulu, Hawaii. During a typical working day, she spends about 30% of her time supervising 15 employees, another 30% in meetings and in conferences, and about 40% working with financial reports and records. After working hours, she enjoys the recreational facilities of the Boating Club and of Hawaii, which are swimming, surfing, boating, tennis, and fishing.

As you work through the activities of this unit, you will learn that some of the tasks which an accountant must perform are:

1. Computing the gross income for a business
2. Computing total expenses
3. Computing net income (gross income less expenses)
4. Computing total assets (money value of things owned)
5. Computing total liabilities (money value of things owned)

If you are interested and should you complete your work before the end of the time allowed, you will:

1. Compute your own weekly net income.

2. Compute your own net worth (money value of things you own less what you owe).

Now, turn the page and begin your experience as an accountant!

HOW LOSSES ARE EXPRESSED ON FINANCIAL REPORTS

The owners of any business hope that they will always take in more money than they will spend; that is, they hope that they will make a profit or gain from business operations. When more money is spent than the amount that is taken in, the business is said to have suffered a loss.

Accountants will enclose a number in parentheses (pronounced pa ren' thu sees) when it represents a loss instead of a gain.

Tasks:

1. Look at the list of numbers below that are to be added:

	$ 1,520.00
	1,610.00
	(1,100.00)
	4,100.00
TOTAL	$________

2. What did you notice about one of the amounts?____.

3. Is your answer something like, "It is enclosed in parentheses"?__________.

   Note: When a number represents a loss, accountants will use parentheses instead of red ink. These amounts are to be subtracted.

4. Which three amounts above are to be added?____________, ____________, and __________.

5. Which amount will then be subtracted?______________________________.

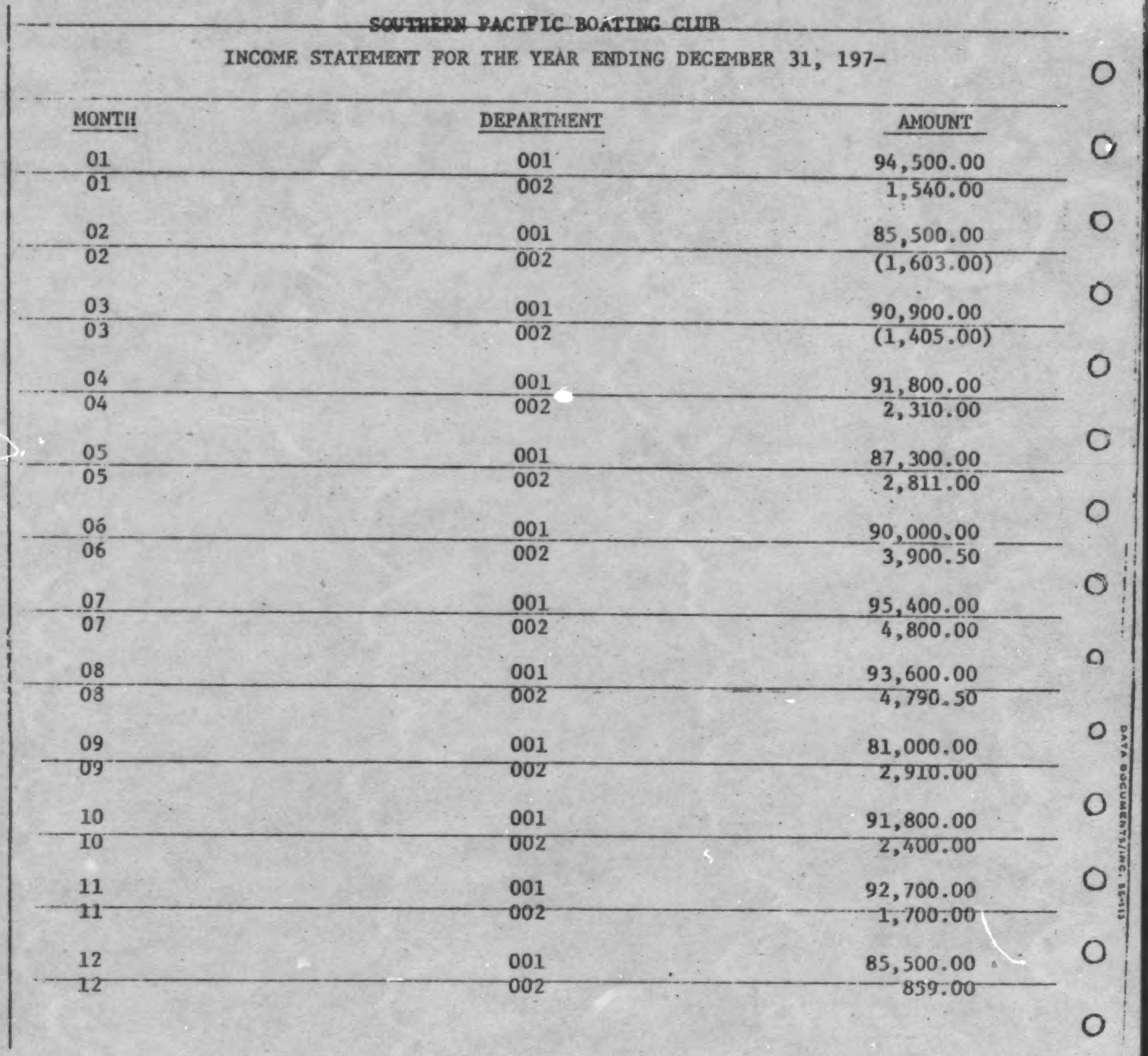
6. Compute the total gain; record this figure in the space provided.

7. Now, turn to the following page and look at the figures in the "Amount" column.

8. List the two numbers which represent losses for the Southern Pacific Boating Club. _________________________ and _________________________.

You are now ready for Activity 2 on page _19__.

COMPUTER PRINTOUT



SOUTHERN PACIFIC BOATING CLUB

INCOME STATEMENT FOR THE YEAR ENDING DECEMBER 31, 197-

MONTH	DEPARTMENT	AMOUNT
01	001	94,500.00
01	002	1,540.00
02	001	85,500.00
02	002	(1,603.00)
03	001	90,900.00
03	002	(1,405.00)
04	001	91,800.00
04	002	2,310.00
05	001	87,300.00
05	002	2,811.00
06	001	90,000.00
06	002	3,900.50
07	001	95,400.00
07	002	4,800.00
08	001	93,600.00
08	002	4,790.50
09	001	81,000.00
09	002	2,910.00
10	001	91,800.00
10	002	2,400.00
11	001	92,700.00
11	002	1,700.00
12	001	85,500.00
12	002	859.00

IMPORTANT

Read Month column: 01 - January; 02 - February; 03 - March, etc.
Department column: 001 - Membership fees income; 002 - Operations income.

Activity 2

FINDING THE GROSS INCOME OF A BOATING CLUB

> An accountant uses addition to compute the gross income of a business.

The *gross income* of the Southern Pacific Boating Club, for a certain period of time, such as a week, month, or year, represents the total of the amounts of money it receives from membership fees and from the operations of the restuarant, supply and service shops, fueling station, and marina (docking area). At the present time, the Boating Club limits itself to 1,200 members. Each pays a yearly fee of $900. This fee allows the members and their families the use of the clubhouse, tennis courts, swimming pool, and docking facilities.

Tasks:

Assume that Ann Jackson is out for the day and that you have been asked to take over some of her responsibilities. Your first task is to complete the report shown below. Refer to the computer printout on the previous page to find the monthly income from membership fees and club operations. Enter each amount in the proper space on the report; then, compute and record the total of the membership fees and the total amount from operations.

SOUTHERN PACIFIC BOATING CLUB

Income from Fees and Operations

For Year Ending December 31, 19____

	Membership Fees	Operations
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
TOTAL	$	$

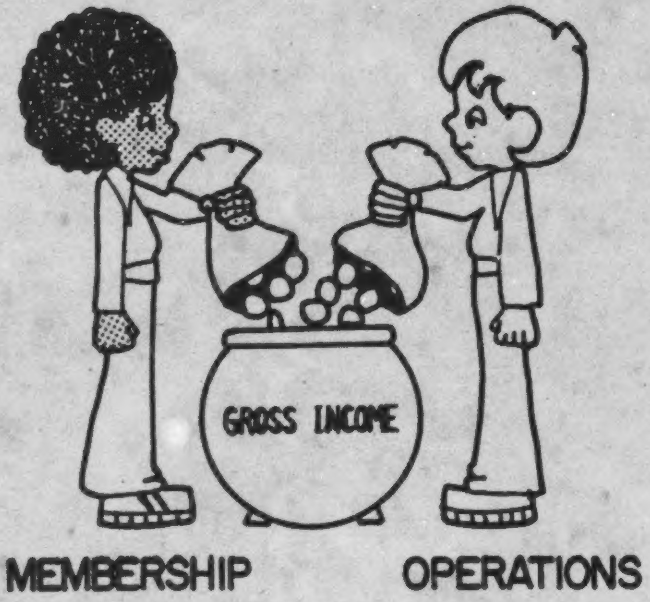
Computing Gross Income:

You have just determined the total income received from membership fees and total income from the operations of the Boating Club. Record these amounts in the proper spaces on the form below, then add the two figures to find the gross income.

SOUTHERN PACIFIC BOATING CLUB

Gross Income for Year Ending December 31, 19___

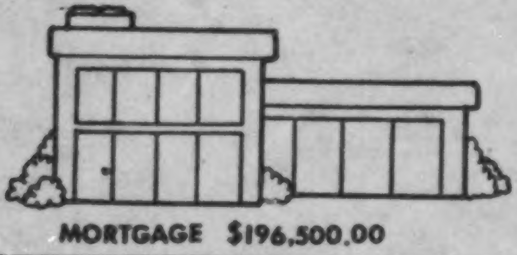
Total Income from Membership Fees	$__________
Total Income from Operations	__________
GROSS INCOME	$__________

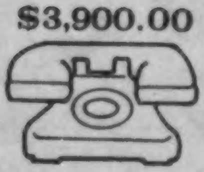


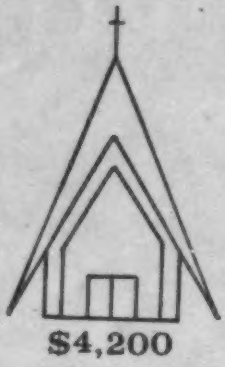
FINDING THE TOTAL EXPENSES OF A BOATING CLUB

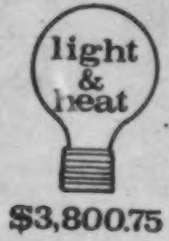
> An accountant uses addition to compute the total expenses of a business.

The Southern Pacific Boating Club had the following expenses last year. As an accountant for a day, find the total.


MORTGAGE $196,500.00






light
&
heat
$3,800.75

EXPENSE REPORT

Automobile Expense $__________

Contributions __________

Depreciation Expense __________

Insurance __________

Light & Heat __________

Mortgage __________

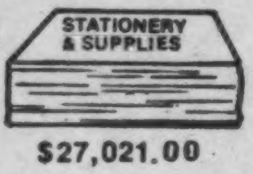
Salaries __________

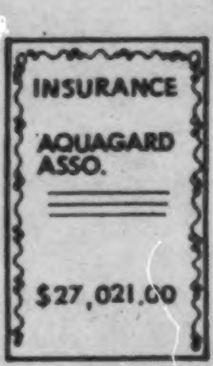
Social Security Taxes __________

Stationery & Supplies __________

Telephone __________

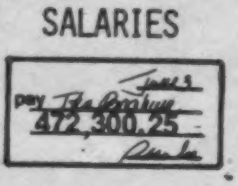
TOTAL EXPENSES $__________

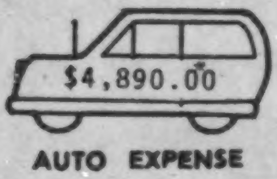

STATIONERY
& SUPPLIES
$27,021.00

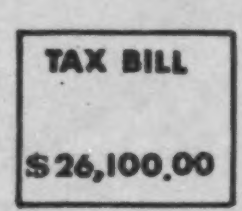

INSURANCE

AQUAGARD ASSO.

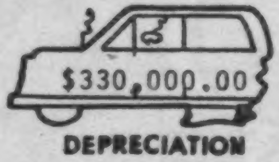
$27,021.00


SALARIES
pay
472,300.25


$4,890.00
AUTO EXPENSE


TAX BILL

$26,100,00


$330,000.00
DEPRECIATION

FINDING NET INCOME

An accountant uses subtraction to compute net income.

When part of the gross income of a business is used to pay expenses, the amount that is left over is called the *net income*.

Task:

What was the gross income for the Boating Club?____________________

What were the total expenses?____________________________________

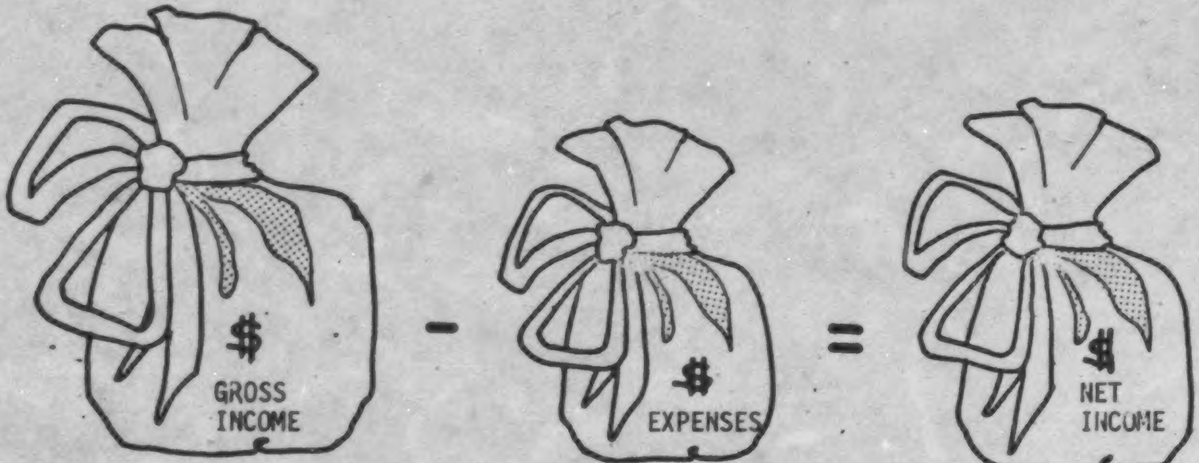
Enter these amounts on the statement below. Then, compute the net income by subtracting.

SOUTHERN PACIFIC BOATING CLUB

Net Income

For Year Ending December 31, 19___

Gross Income	$__________________
Total Expenses	$__________________
NET INCOME	$__________________



FINDING THE TOTAL ASSETS OF THE BOATING CLUB

An accountant uses addition to compute the total assets of a business.

Anything of money value which a person or a business owns is called an asset. There are two basic types:

Current assets: include cash and other things that can be easily turned into cash.

Fixed assets: include things that might take a great deal of time to turn into cash.

Task:

During your day as an accountant, one of your responsibilities is to determine the total assets of the Boating Club. Current assets and fixed assets are listed on the statement below. Find the total for each; then, compute the total amount for both types.

SOUTHERN PACIFIC BOATING CLUB

Total Assets

For Year Ending December 31, 19___

CURRENT ASSETS		
Bank Account	$ 12,100.00	
Government Bonds	10,000.00	
Members' Accounts	9,000.00	
Merchandise in Stock	23,400.80	
Cash	100.00	
Insurance	13,400.20	
Total Current Assets		$______
FIXED ASSETS		
Real Estate	$ 2,450,000.00	
Equipment & Fixtures	720,000.00	
Automobile & Boats	51,716.00	
Total Fixed Assets		$______
TOTAL ASSETS		$______

FINDING TOTAL LIABILITIES AND NET WORTH

An accountant uses addition to compute total liabilities; subtraction is used to compute the net worth of a business.

Total Liabilities

Any amount of money that a business owes is a liability. The liabilities of the Southern Pacific Boating Club include payments to be made on accounts, money which the Club owes on real estate, and taxes which are due.

Task:

Compute the total liabilities for the Boating Club; then record this amount on the statement below:

SOUTHERN PACIFIC BOATING CLUB

Total Liabilities

For Year Ending December 31, 19___

Accounts Due	$ 2,300.00
Mortgage	2,521,000.00
Real Estate Taxes	21,200.50
FICA Taxes	6,500.50
TOTAL LIABILITIES	$________

Net Worth

The net worth of a business is the difference between its total assets (what it owns) and its total liabilities (what it owes).

Task:

On the statement below, compute the net worth of the Boating Club.

SOUTHERN PACIFIC BOATING CLUB
Net Worth
For Year Ending December 31, 19___

TOTAL ASSETS	$________
TOTAL LIABILITIES	________
NET WORTH	$________

Activity 7

IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as an accountant; then answer the questions below:

(Circle One)

1. Would you like to keep track of the income of a business? YES NO

2. Would you like to compute the net income (profit) of a business? YES NO

3. Would you like to compute what a business is worth? YES NO

4. Do you think that you would like to be accurate when computing amounts of money? YES NO

5. Do you think you would like to pay attention to detail when working on reports? YES NO

6. Do you think you would like to be an accountant? YES NO

If you have answered "Yes" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are accountants.
3. Taking accounting and other business courses while in high school.
4. Going to a college or university where you will work toward a degree in Business Administration with a specialty in Accounting.

PREPARING A PERSONAL INCOME STATEMENT

Why not use addition and subtraction to compute your net income?

REMEMBER:

Your net income, for a certain period of time, is the total of the amounts of all of the money that you receive less the total of the amounts of all of the money that you spend. With this in mind, please complete the form below:

____
(Print your name here.)

INCOME STATEMENT

For the Week Ended__________________________

MONEY RECEIVED FROM:	(Amount)	
____________________	$__________	
____________________	$__________	
____________________	$__________	
TOTAL OF MONEY RECEIVED		$__________
MONEY SPENT ON:		
____________________	$__________	
____________________	$__________	
____________________	$__________	
____________________	$__________	
TOTAL OF MONEY SPENT		$__________
NET INCOME		$__________

COMPUTING PERSONAL NET WORTH

Now use addition and subtraction to compute your net worth.

REMEMBER:

Assets less liabilities (money value of all things owned less the total of all amounts due others) = Net Worth. With this in mind, complete the statement below:

____
(Print Your Name Here)

NET WORTH

____
(Current Date)

PERSONAL ASSETS:	(Value)	
______________________	$____________	
______________________	____________	
______________________	____________	
______________________	____________	
______________________	____________	
TOTAL VALUE OF ASSETS		$____________
PERSONAL LIABILITIES:		
______________________	$____________	
______________________	____________	
______________________	____________	
______________________	____________	
TOTAL LIABILITIES		$____________
PERSONAL NET WORTH		$____________

UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN HANDLING THE BANKING ACTIVITIES AND PETTY CASH FUND FOR A BOATING CLUB

PURPOSE:

This unit will afford students an opportunity to read about the job of an accounting clerk who must apply skills in addition and subtraction while handling large and small sums of money.

ACTIVITIES:

While working through the activities of this unit, students will complete a bank deposit slip, write checks and complete check stubs, and keep a record of small cash expenditures for the Southern Pacific Boating Club.

Before Class Begins:

1. Duplicate and assemble enough copies of the student simulation packet (pages 42-53) to provide each student with a set.
2. Read the "General Information About Bookkeepers and Accounting Clerks," which is on page 29; then scan the keys which follow.

During Class:

1. Distribute the simulation packets; read and discuss, with your students, the introductory information on page 42.
2. Ask students to complete the activities on pages 43 through 53. While they are busy with their tasks, study the information on the Keys which begin on page 30.
3. When a majority of your students indicate that they have completed their work, go through the entire unit with them. Check answers and discuss any items listed on the keys to each of the activities.

GENERAL INFORMATION ABOUT *BOOKKEEPERS AND ACCOUNTING CLERKS

Historically, the term, "bookkeeper", referred to that person who kept all of the financial records of a firm in "book form". And, at one time, almost every business organization employed one person, called a "general bookkeeper", who assumed this responsibility. Some small companies have retained such an employee; however, as other businesses grew in size, and as the nature of their financial transactions grew in complexity, the "general bookkeeper" was replaced with an "accounting department" where financial recording and reporting responsibilities are shared by several bookkeepers or accounting clerks who work under the supervision of an accountant.

In companies where there is an accounting department, the accountant in charge is responsible for the implementation and efficient operation of the accounting or data processing system, making decisions, and interpreting financial reports and records to business owners. Tasks such as recording transactions in books called "journals" and "ledgers", writing checks, and preparing summary reports which reflect the financial condition of a business are divided among the several bookkeepers or accounting clerks who work under the direction of the accountant.

Training and Special Skills Required:

Candidates for the positions of bookkeepers and accounting clerks should be high school graduates who have studied bookkeeping or accounting and such related subjects as business arithmetic, business principles, business machines, and typewriting. Desirable personal skills include an above-average aptitude for working with numbers, legible handwriting, and an ability to concentrate on detailed work.

Opportunities for Advancement:

Some experienced bookkeepers and accounting clerks who have leadership ability are promoted to supervisory positions. Those who obtain the necessary training from a college or university may advance to the job of an accountant.

Employment Outlook, Working Conditions, and Salaries:

The need of business for bookkeeping and accounting clerks is expected to increase, at a moderate rate, over the next 10 to 15 years. Annually, around 75,000 are needed to replace employees who resign, retire, or who transfer to other positions.

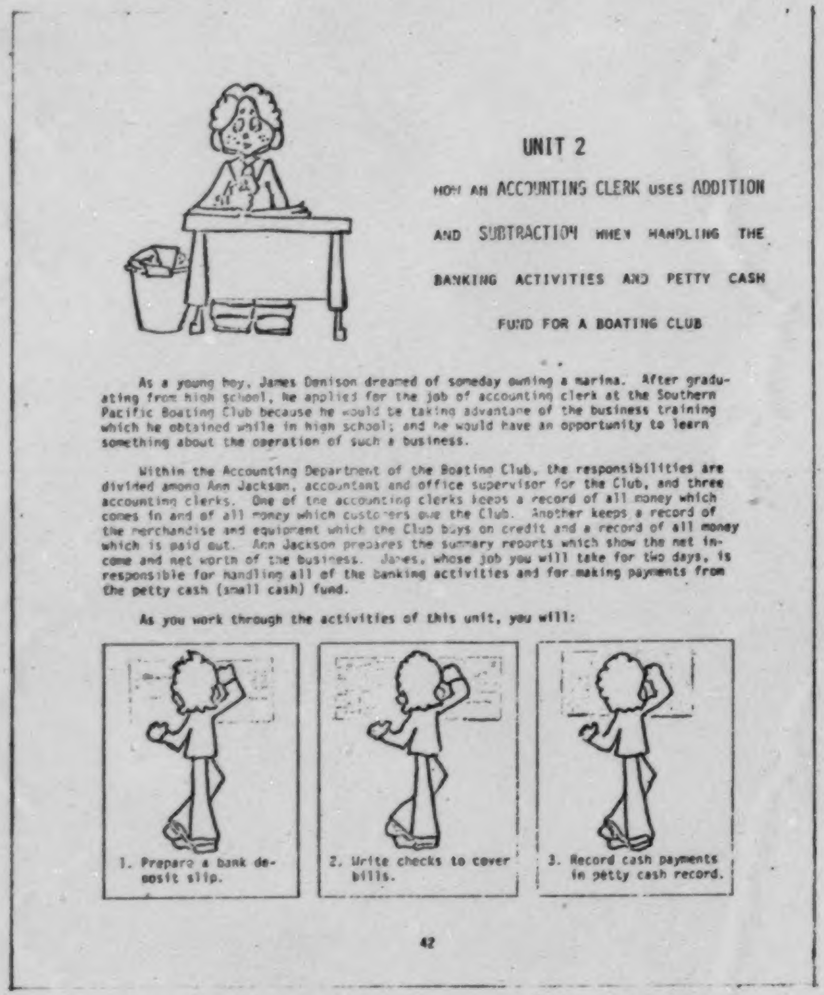
As office workers, bookkeeping and accounting clerks work indoors amid pleasant surroundings. And, their salaries are comparable to those who hold other types of clerical jobs.

**In current business practice, the term, "bookkeeper", is gradually fading from general use. "Accounting clerk" is now the preferred term used to identify the job classification of those who share the recording and reporting functions of a firm.*

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN HANDLING THE BANKING ACTIVITIES AND PETTY CASH FUND FOR A BOATING CLUB

Introductory Page of Student Packet:



UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN HANDLING THE BANKING ACTIVITIES AND PETTY CASH FUND FOR A BOATING CLUB

As a young boy, James Denison dreamed of someday owning a marina. After graduating from high school, he applied for the job of accounting clerk at the Southern Pacific Boating Club because he would be taking advantage of the business training which he obtained while in high school; and he would have an opportunity to learn something about the operation of such a business.

Within the Accounting Department of the Boating Club, the responsibilities are divided among Ann Jackson, accountant and office supervisor for the Club, and three accounting clerks. One of the accounting clerks keeps a record of all money which comes in and of all money which customers owe the Club. Another keeps a record of the merchandise and equipment which the Club buys on credit and a record of all money which is paid out. Ann Jackson prepares the summary reports which show the net income and net worth of the business. James, whose job you will take for two days, is responsible for handling all of the banking activities and for making payments from the petty cash (small cash) fund.

As you work through the activities of this unit, you will:

1. Prepare a bank deposit slip.
2. Write checks to cover bills.
3. Record cash payments in petty cash record.

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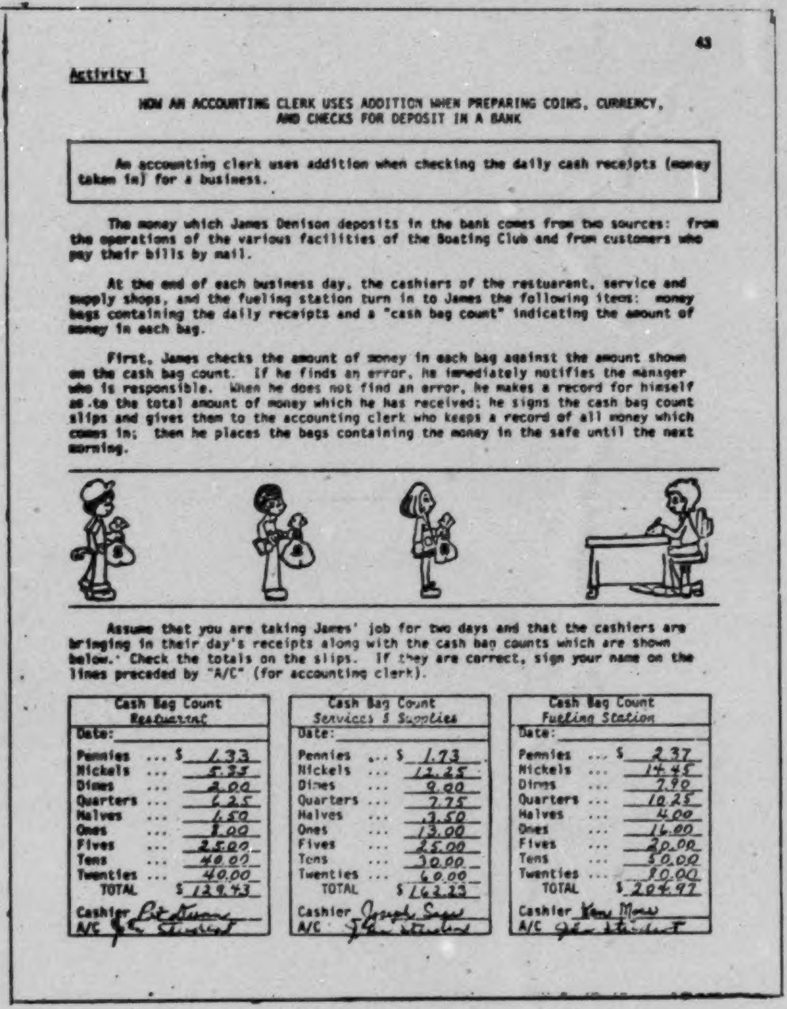
As your students discuss the information on this page, you may want to suggest that they:

1. Talk about how a person may advance from an entry-level job to one involving supervisory or managerial responsibilities.
2. Give a possible rationale for the division of labor within the Accounting Department at the Boating Club. *(A division of responsibilities, as described in the second paragraph on this page, may lead to efficiency, accuracy, and honesty in recording and reporting financial information.)*

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

Activity 1:



Activity 1

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

> An accounting clerk uses addition when checking the daily cash receipts (money taken in) for a business.

The money which James Denison deposits in the bank comes from two sources: from the operations of the various facilities of the Boating Club and from customers who pay their bills by mail.

At the end of each business day, the cashiers of the restuarent, service and supply shops, and the fueling station turn in to James the following items: money bags containing the daily receipts and a "cash bag count" indicating the amount of money in each bag.

First, James checks the amount of money in each bag against the amount shown on the cash bag count. If he finds an error, he immediately notifies the manager who is responsible. When he does not find an error, he makes a record for himself as to the total amount of money which he has received; he signs the cash bag count slips and gives them to the accounting clerk who keeps a record of all money which comes in; then he places the bags containing the money in the safe until the next morning.

Assume that you are taking James' job for two days and that the cashiers are bringing in their day's receipts along with the cash bag counts which are shown below. Check the totals on the slips. If they are correct, sign your name on the lines preceded by "A/C" (for accounting clerk).

	Cash Bag Count Restaurant	Cash Bag Count Services & Supplies	Cash Bag Count Fueling Station
Date:			
Pennies ...	$ 1.33	$ 1.73	$ 2.37
Nickels ...	5.35	12.25	14.45
Dimes ...	2.00	9.00	7.90
Quarters ...	6.25	7.75	10.25
Halves ...	6.50	3.50	4.00
Ones ...	3.00	13.00	16.00
Fives ...	25.00	25.00	20.00
Tens ...	40.00	30.00	50.00
Twenties ...	40.00	60.00	80.00
TOTAL	$ 129.43	$ 162.23	$ 204.97
Cashier			
A/C			

The information on this sheet and the next is concerned with how the task of making out a deposit slip originates at the Southern Pacific Boating Club. The cash bag counts are simplified versions of those used by some large organizations. Questions which may stimulate a class discussion are:

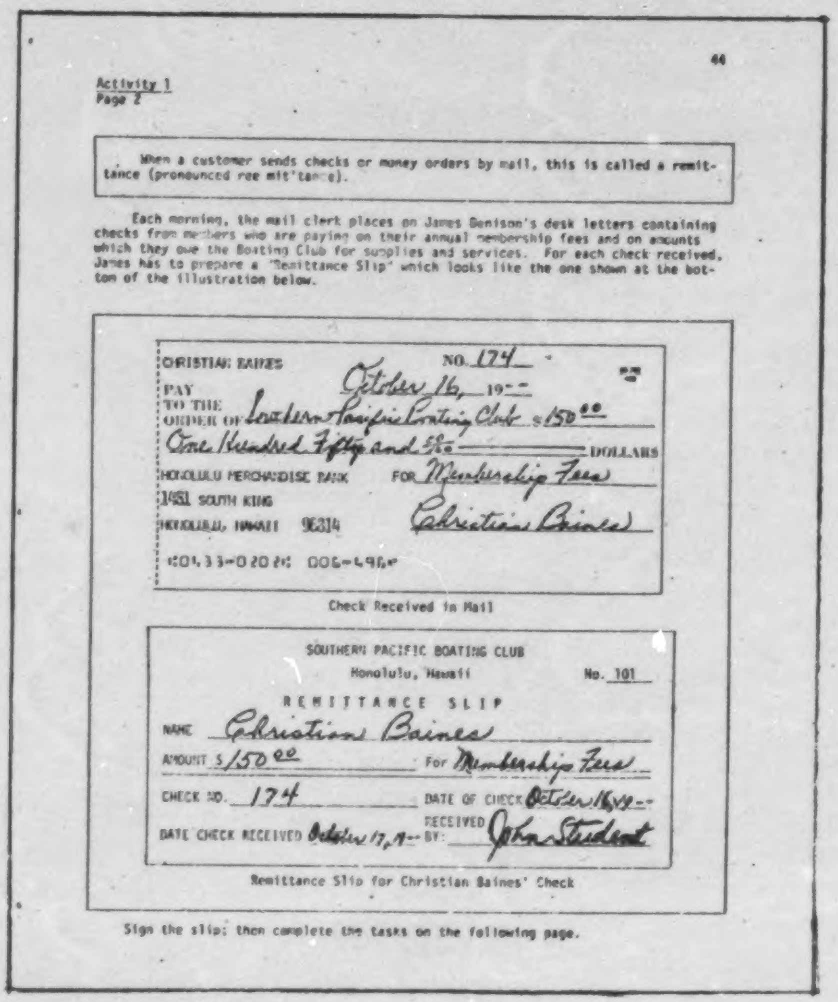
1. Why are cash bag counts used? *(They make it convenient for the accounting clerk to check the contents of the money bag against the amount indicated on the slip.)*

2. When an accounting clerk signs a cash bag count and passes it on to the accounting clerk who keeps a record of cash receipts, what is he really saying? *(He is saying that he has received the amount indicated on the slip and that the count is correct.)*

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

Activity 1, Page 2:



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Activity 1
Page 2

When a customer sends checks or money orders by mail, this is called a remittance (pronounced ree mit'tance).

Each morning, the mail clerk places on James Denison's desk letters containing checks from members who are paying on their annual membership fees and on amounts which they owe the Boating Club for supplies and services. For each check received, James has to prepare a "Remittance Slip" which looks like the one shown at the bottom of the illustration below.

CHRISTIAN BAINES NO. 174
October 16, 19--
PAY TO THE ORDER OF Southern Pacific Boating Club $150.00
One Hundred Fifty and 00/xx DOLLARS
HONOLULU MERCHANDISE BANK FOR Membership Fees
1451 SOUTH KING
HONOLULU, HAWAII 96314
Christian Baines
⑆01433⑆0202⑆ 006-496⑈

Check Received in Mail

SOUTHERN PACIFIC BOATING CLUB
Honolulu, Hawaii No. 101
REMITTANCE SLIP
NAME Christian Baines
AMOUNT $150.00 For Membership Fees
CHECK NO. 174 DATE OF CHECK October 16, 19--
DATE CHECK RECEIVED October 17, 19-- RECEIVED BY: John Student

Remittance Slip for Christian Baines' Check

Sign the slip; then complete the tasks on the following page.

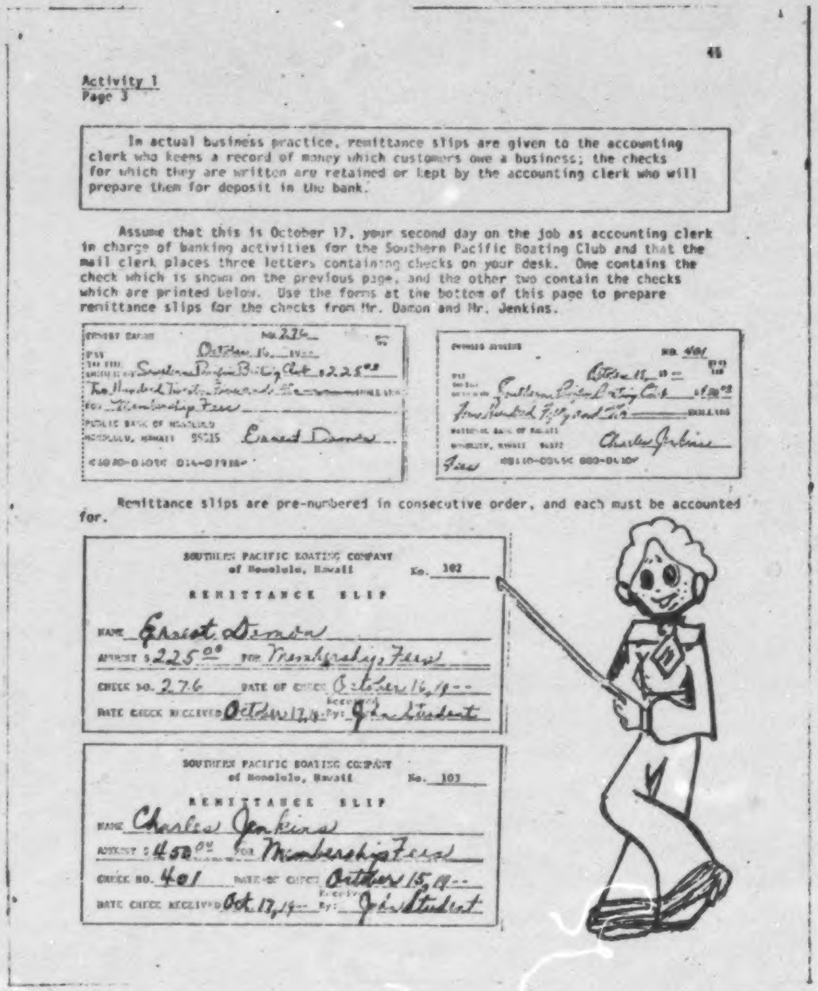
The information on this sheet describes a procedure which some accounting clerks follow when checks are received by mail. A suggested question for discussion is:

Why are remittance slips used? *(At the Boating Club, and in other organizations where there is a division of duties, the accounting clerk who handles incoming checks is not the same person who keeps a record of this asset. A remittance slip is a convenient means of notifying the accounting clerk in charge of customers' accounts (accounts receivable) that a payment has been received.)*

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

Activity 1, Page 3:



Activity 1
Page 3

In actual business practice, remittance slips are given to the accounting clerk who keeps a record of money which customers owe a business; the checks for which they are written are retained or kept by the accounting clerk who will prepare them for deposit in the bank.

Assume that this is October 17, your second day on the job as accounting clerk in charge of banking activities for the Southern Pacific Boating Club and that the mail clerk places three letters containing checks on your desk. One contains the check which is shown on the previous page, and the other two contain the checks which are printed below. Use the forms at the bottom of this page to prepare remittance slips for the checks from Mr. Damon and Mr. Jenkins.

Remittance slips are pre-numbered in consecutive order, and each must be accounted for.

SOUTHERN PACIFIC BOATING COMPANY
of Honolulu, Hawaii No. 102
REMITTANCE SLIP
NAME Ernest Damon
AMOUNT $225.00 FOR Membership Fees
CHECK NO. 276 DATE OF CHECK October 16, 19--
DATE CHECK RECEIVED October 17, 19-- Received By: John Student

SOUTHERN PACIFIC BOATING COMPANY
of Honolulu, Hawaii No. 103
REMITTANCE SLIP
NAME Charles Jenkins
AMOUNT $450.00 FOR Membership Fees
CHECK NO. 401 DATE OF CHECK October 15, 19--
DATE CHECK RECEIVED Oct. 17, 19-- Received By: John Student

The task on this sheet involves the transferring of information from one form to another. You may want to display remittance slips which are neat, accurate, and complete; and you may want to raise the following questions for discussion:

1. Why are remittance slips prenumbered in consecutive order? *(This is a control measure. The accounting clerk who receives them should immediately question a missing number.)*

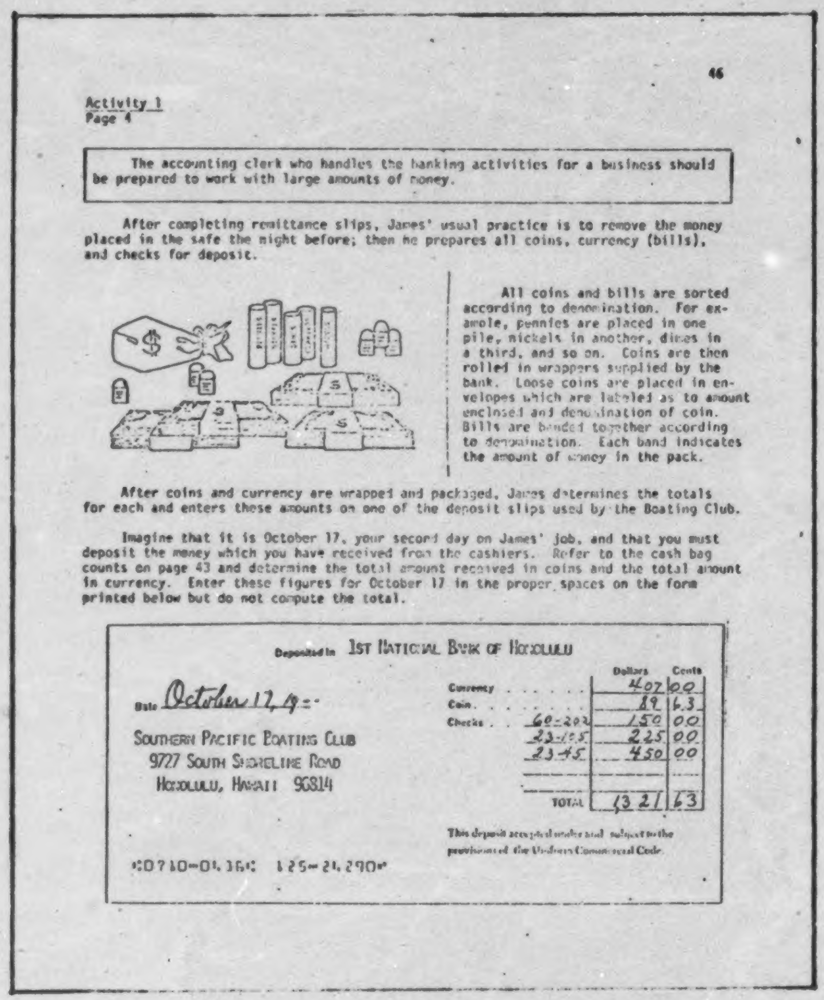
2. Mistakes on remittance slips can lead to what kinds of problems? *(Among answers you may anticipate are: The wrong customer may be credited for a payment, and a customer may be credited for more or less than the amount of his check.)*

HOW AN

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT

Activity 1, Page 4:



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Activity 1
Page 4

The accounting clerk who handles the banking activities for a business should be prepared to work with large amounts of money.

After completing remittance slips, James' usual practice is to remove the money placed in the safe the night before; then he prepares all coins, currency (bills), and checks for deposit.

All coins and bills are sorted according to denomination. For example, pennies are placed in one pile, nickels in another, dimes in a third, and so on. Coins are then rolled in wrappers supplied by the bank. Loose coins are placed in envelopes which are labeled as to amount enclosed and denomination of coin. Bills are banded together according to denomination. Each band indicates the amount of money in the pack.

After coins and currency are wrapped and packaged, James determines the totals for each and enters these amounts on one of the deposit slips used by the Boating Club.

Imagine that it is October 17, your second day on James' job, and that you must deposit the money which you have received from the cashiers. Refer to the cash bag counts on page 43 and determine the total amount received in coins and the total amount in currency. Enter these figures for October 17 in the proper spaces on the form printed below but do not compute the total.

Deposited in 1ST NATIONAL BANK OF HONOLULU

Date October 17, 19--

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

		Dollars	Cents
Currency		407	00
Coin		89	63
Checks	60-202	150	00
	23-105	225	00
	23-45	450	00
TOTAL		1321	63

This deposit accepted under and subject to the provisions of the Uniform Commercial Code.

⑆0710-0136⑆ 125-24290⑈

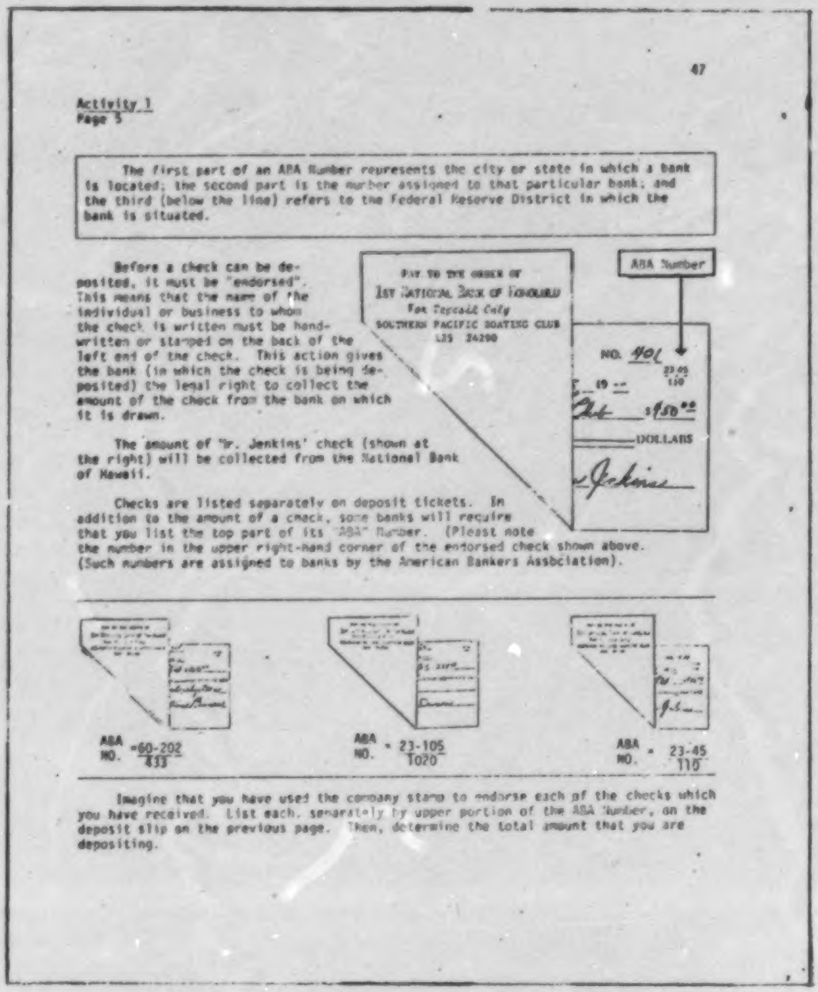
To supplement the information given in the upper section of this sheet, you may want your students to interview one of the cashiers or the bookkeeper at your school. If possible, obtain some coin wrappers and envelopes so that your students can examine them.

To complete the deposit slip on the lower section of this sheet, your students will have to refer to the cash bag counts at the bottom of page 43. Individual coin and currency counts are: Restuarant - $16.43 and $113.00; Services and Supplies - $34.23 and $128.00; Fueling Station - $38.97 and $166.00 .

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

Activity 1, Page 5:



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Activity 1
Page 5

The first part of an ABA Number represents the city or state in which a bank is located; the second part is the number assigned to that particular bank; and the third (below the line) refers to the Federal Reserve District in which the bank is situated.

Before a check can be deposited, it must be "endorsed". This means that the name of the individual or business to whom the check is written must be handwritten or stamped on the back of the left end of the check. This action gives the bank (in which the check is being deposited) the legal right to collect the amount of the check from the bank on which it is drawn.

The amount of Mr. Jenkins' check (shown at the right) will be collected from the National Bank of Hawaii.

Checks are listed separately on deposit tickets. In addition to the amount of a check, some banks will require that you list the top part of its "ABA" Number. (Please note the number in the upper right-hand corner of the endorsed check shown above. (Such numbers are assigned to banks by the American Bankers Association).

ABA NO. = $\frac{60\text{-}202}{433}$

ABA NO. = $\frac{23\text{-}105}{1020}$

ABA NO. = $\frac{23\text{-}45}{110}$

Imagine that you have used the company stamp to endorse each of the checks which you have received. List each, separately by upper portion of the ABA Number, on the deposit slip on the previous page. Then, determine the total amount that you are depositing.

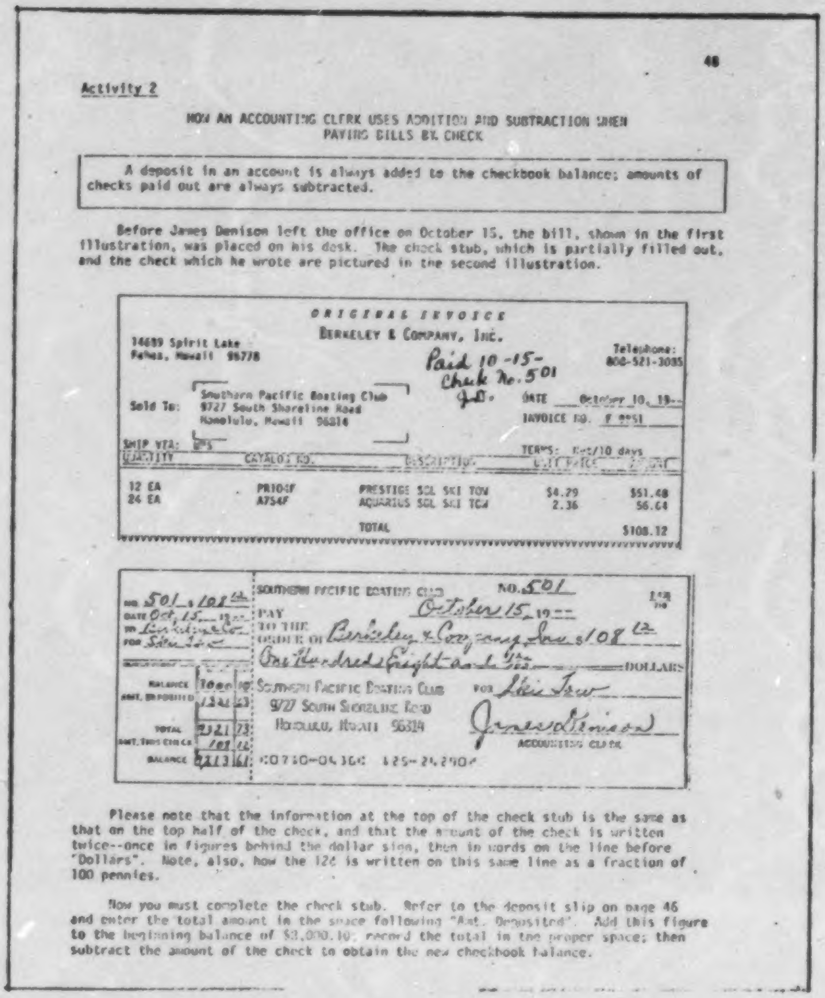
It is important that students read all of the information on this sheet for they will find out how checks are prepared for deposit, why checks are endorsed, and what the ABA number on a check represents.

In the last paragraph, students are given directions as to how to complete the deposit slip on page 46. They are to list three checks separately by upper portions of their ABA numbers and to determine the total deposit.

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN PAYING BILLS BY CHECK

Activity 2:



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Activity 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN PAYING BILLS BY CHECK

A deposit in an account is always added to the checkbook balance; amounts of checks paid out are always subtracted.

Before James Denison left the office on October 15, the bill, shown in the first illustration, was placed on his desk. The check stub, which is partially filled out, and the check which he wrote are pictured in the second illustration.

ORIGINAL INVOICE

BERKELEY & COMPANY, INC.

14689 Spirit Lake
Pahoa, Hawaii 96778

Telephone:
808-521-3085

Paid 10-15-
Check No. 501
J.D.

Sold To:
Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96814

DATE October 10, 19--
INVOICE NO. F 9951

SHIP VIA: UPS
TERMS: Net/10 days

QUANTITY	CATALOG NO.	DESCRIPTION	UNIT PRICE	AMOUNT
12 EA	PR104F	PRESTIGE SGL SKI TOW	$4.29	$51.48
24 EA	A754F	AQUARIUS SGL SKI TOW	2.36	56.64
		TOTAL		$108.12

No. 501 $108 12/100
Date Oct. 15 19--
To Berkeley & Co.
For Ski Tow

BALANCE	8000	10
AMT. DEPOSITED	1321	63
TOTAL	9321	73
AMT. THIS CHECK	108	12
BALANCE	9213	61

SOUTHERN PACIFIC BOATING CLUB NO. 501

October 15, 19--

PAY TO THE ORDER OF Berkeley & Company Inc. $108 12/100

One Hundred Eight and 12/100 DOLLARS

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

FOR Ski Tow

James Denison
ACCOUNTING CLERK

Please note that the information at the top of the check stub is the same as that on the top half of the check, and that the amount of the check is written twice--once in figures behind the dollar sign, then in words on the line before "Dollars". Note, also, how the 12¢ is written on this same line as a fraction of 100 pennies.

Now you must complete the check stub. Refer to the deposit slip on page 46 and enter the total amount in the space following "Amt. Deposited". Add this figure to the beginning balance of $8,000.10, record the total in the proper space; then subtract the amount of the check to obtain the new checkbook balance.

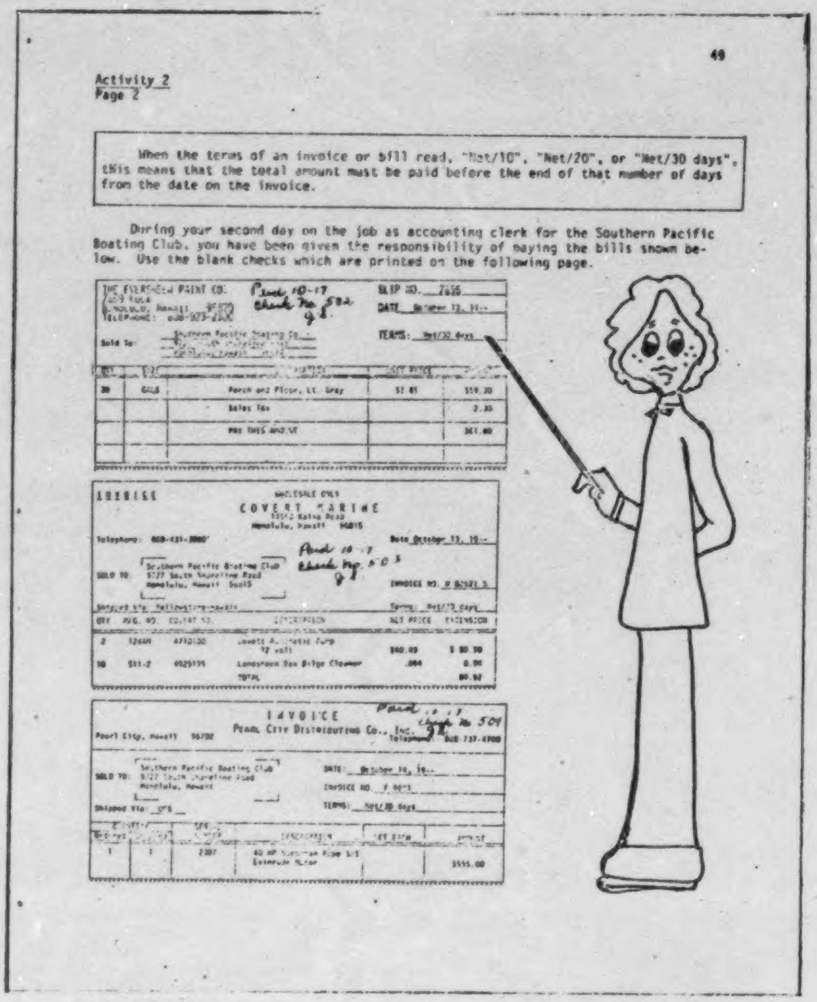
A bill from Berkeley & Company, Inc. and its accompanying check are pictured on this page. As they write checks to pay the bills shown on the following page, your students should use the check on this sheet as a model.

As they complete the check stub on this sheet, your students will refer to page 46 and enter the amount of the deposit ($1,321.63) on the line opposite "Amt. Deposited". When this figure is added to the beginning balance of $8,000.10, they should get a total $9,321.73. When the $108.12 check is subtracted, they should arrive at a checkbook balance of $9,213.61.

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN PAYING BILLS BY CHECK

Activity 2, Page 2:



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Activity 2
Page 2

When the terms of an invoice or bill read, "Net/10", "Net/20", or "Net/30 days", this means that the total amount must be paid before the end of that number of days from the date on the invoice.

During your second day on the job as accounting clerk for the Southern Pacific Boating Club, you have been given the responsibility of paying the bills shown below. Use the blank checks which are printed on the following page.

Your students will use the forms on page 50 to write checks for the bills shown on this sheet.

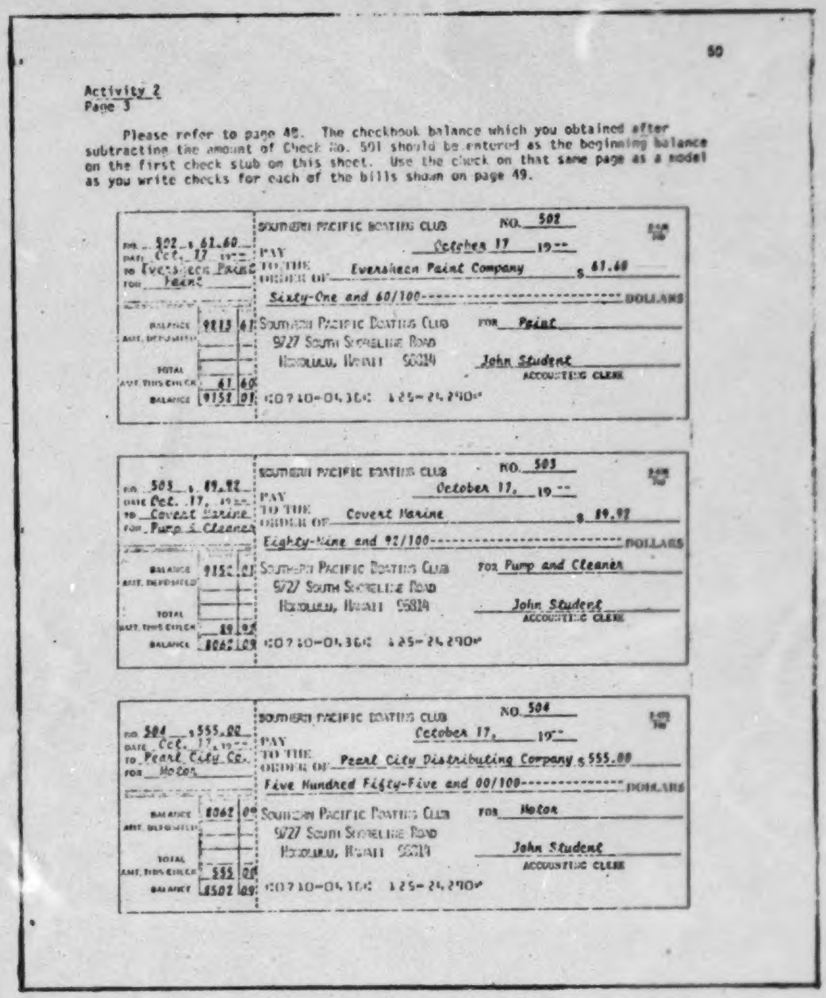
Direct attention to the written notation on the Berkeley Invoice on page 48 and ask your students to use their own initials as they make similar notations on the bills which they are paying.

You may want to mention that Invoices, bearing these "Paid" notations, are given to the accounting clerk who keeps a record of all money paid out.

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN PAYING BILLS BY CHECK

Activity 2, Page 3:



50

Activity 2
Page 3

Please refer to page 48. The checkbook balance which you obtained after subtracting the amount of Check No. 501 should be entered as the beginning balance on the first check stub on this sheet. Use the check on that same page as a model as you write checks for each of the bills shown on page 49.

NO. 502 $ 61.60
DATE Oct. 17 19--
TO Eversheen Paint
FOR Paint
BALANCE 9213 | 61
AMT. DEPOSITED
TOTAL
AMT. THIS CHECK 61 | 60
BALANCE 9152 | 01

SOUTHERN PACIFIC BOATING CLUB NO. 502
October 17 19--
PAY TO THE ORDER OF Eversheen Paint Company $ 61.60
Sixty-One and 60/100---------------------------- DOLLARS
Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96814
FOR Paint
John Student
ACCOUNTING CLERK
⑆0710-0436⑆ 125-24290⑈

NO. 503 $ 89.92
DATE Oct. 17, 19--
TO Covert Marine
FOR Pump & Cleaner
BALANCE 9152 | 01
AMT. DEPOSITED
TOTAL
AMT. THIS CHECK 89 | 92
BALANCE 9062 | 09

SOUTHERN PACIFIC BOATING CLUB NO. 503
October 17, 19--
PAY TO THE ORDER OF Covert Marine $ 89.92
Eighty-Nine and 92/100---------------------------- DOLLARS
Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96814
FOR Pump and Cleaner
John Student
ACCOUNTING CLERK
⑆0710-0436⑆ 125-24290⑈

NO. 504 $ 555.00
DATE Oct. 17, 19--
TO Pearl City Co.
FOR Motor
BALANCE 9062 | 09
AMT. DEPOSITED
TOTAL
AMT. THIS CHECK 555 | 00
BALANCE 8507 | 09

SOUTHERN PACIFIC BOATING CLUB NO. 504
October 17, 19--
PAY TO THE ORDER OF Pearl City Distributing Company $ 555.00
Five Hundred Fifty-Five and 00/100-------------- DOLLARS
Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96814
FOR Motor
John Student
ACCOUNTING CLERK
⑆0710-0436⑆ 125-24290⑈

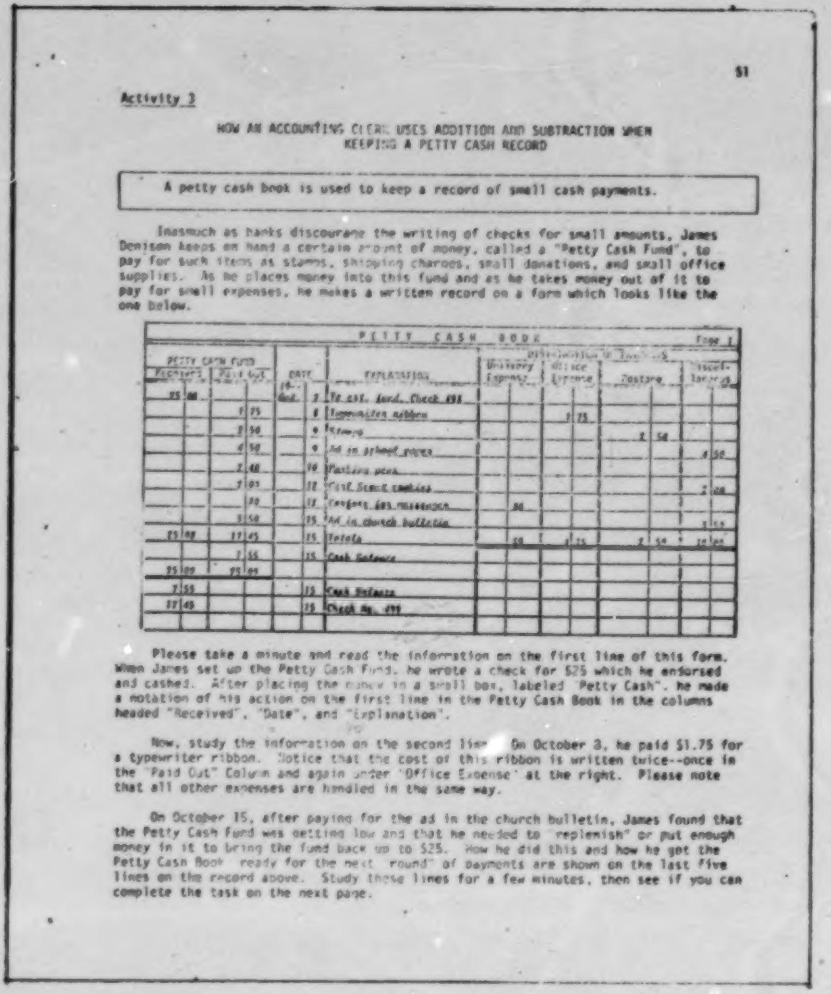
It is suggested that you make and project a transparency of the completed checks and check stubs on this page so that your students may check their own work. Questions for discussion may include:

1. Why is the amount of a check written twice? *(Banks can be reasonably sure of an amount when it is written in words as well as in figures.)*
2. Why should a check stub be completed before the check is written? *(Once a check is removed from a checkbook, the information may be forgotten.)*
3. Mistakes in addition and subtraction on check stubs may lead to what kinds of problems? *(The checkbook balance may indicate an amount which is more than what is actually in a person's account, and banks charge a fee for each check written on insufficient funds.)*

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN KEEPING A PETTY CASH RECORD

Activity 3:



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Activity 3

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN KEEPING A PETTY CASH RECORD

A petty cash book is used to keep a record of small cash payments.

Inasmuch as banks discourage the writing of checks for small amounts, James Denison keeps on hand a certain amount of money, called a "Petty Cash Fund", to pay for such items as stamps, shipping charges, small donations, and small office supplies. As he places money into this fund and as he takes money out of it to pay for small expenses, he makes a written record on a form which looks like the one below.

Please take a minute and read the information on the first line of this form. When James set up the Petty Cash Fund, he wrote a check for $25 which he endorsed and cashed. After placing the money in a small box, labeled "Petty Cash", he made a notation of his action on the first line in the Petty Cash Book in the columns headed "Received", "Date", and "Explanation".

Now, study the information on the second line. On October 3, he paid $1.75 for a typewriter ribbon. Notice that the cost of this ribbon is written twice--once in the "Paid Out" Column and again under "Office Expense" at the right. Please note that all other expenses are handled in the same way.

On October 15, after paying for the ad in the church bulletin, James found that the Petty Cash Fund was getting low and that he needed to "replenish" or put enough money in it to bring the fund back up to $25. How he did this and how he got the Petty Cash Book ready for the next "round" of payments are shown on the last five lines on the record above. Study these lines for a few minutes, then see if you can complete the task on the next page.

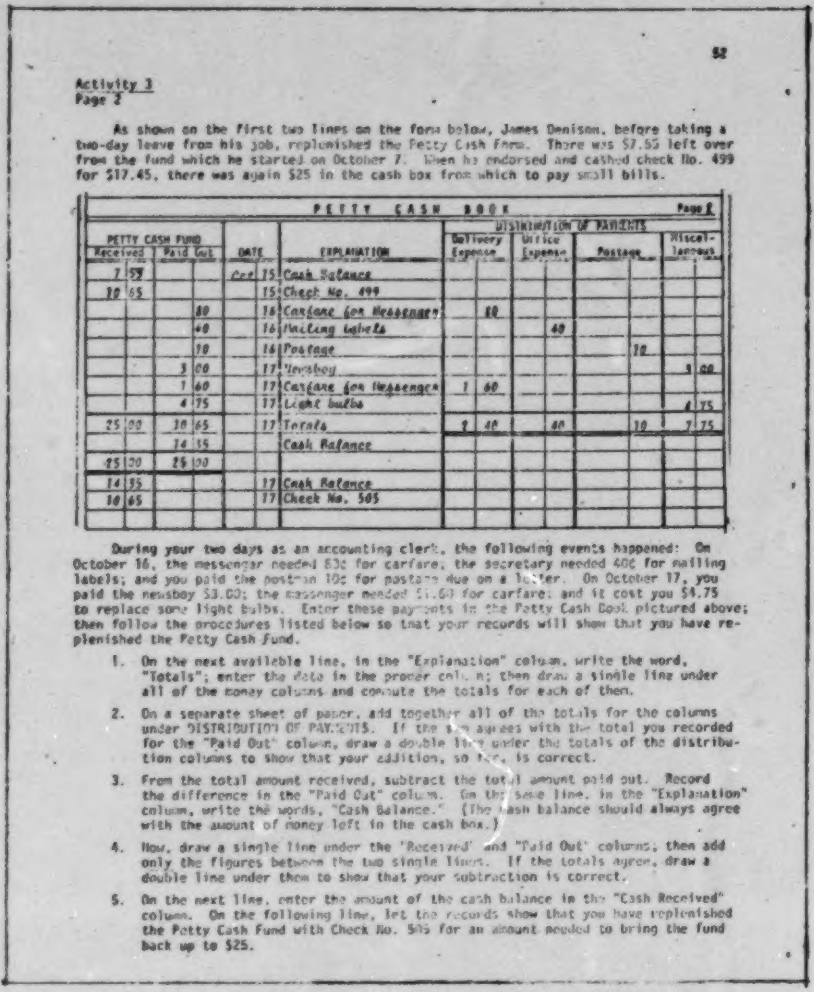
As your students work through this activity, they will have an opportunity to keep a record of small cash expenditures. Before attempting to complete the task on page 52, they should read the information and study the format of the petty cash book on this page.

You may need to mention that when there is no separate column for an item, the cash expended for that item is listed under "Miscellaneous".

KEY - UNIT 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN KEEPING A PETTY CASH RECORD

Activity 3, Page 2:



Activity 3
Page 2

As shown on the first two lines on the form below, James Denison, before taking a two-day leave from his job, replenished the Petty Cash Form. There was $7.55 left over from the fund which he started on October 7. When he endorsed and cashed check No. 499 for $17.45, there was again $25 in the cash box from which to pay small bills.

PETTY CASH BOOK Page 2

PETTY CASH FUND		DATE		EXPLANATION	DISTRIBUTION OF PAYMENTS			
Received	Paid Out				Delivery Expense	Office Expense	Postage	Miscel- laneous
7 55		Oct	15	Cash Balance				
10 65			15	Check No. 499				
	80		16	Carfare for Messenger	80			
	40		16	Mailing labels		40		
	10		16	Postage			10	
	3 00		17	Newsboy				3 00
	1 60		17	Carfare for Messenger	1 60			
	4 75		17	Light bulbs				4 75
25 00	10 65		17	Totals	2 40	40	10	7 75
	14 35			Cash Balance				
25 00	25 00							
14 35			17	Cash Balance				
10 65			17	Check No. 505				

During your two days as an accounting clerk, the following events happened: On October 16, the messenger needed 80¢ for carfare, the secretary needed 40¢ for mailing labels; and you paid the postman 10¢ for postage due on a letter. On October 17, you paid the newsboy $3.00; the messenger needed $1.60 for carfare; and it cost you $4.75 to replace some light bulbs. Enter these payments in the Petty Cash Book pictured above; then follow the procedures listed below so that your records will show that you have replenished the Petty Cash Fund.

1. On the next available line, in the "Explanation" column, write the word, "Totals"; enter the date in the proper column; then draw a single line under all of the money columns and compute the totals for each of them.
2. On a separate sheet of paper, add together all of the totals for the columns under DISTRIBUTION OF PAYMENTS. If the sum agrees with the total you recorded for the "Paid Out" column, draw a double line under the totals of the distribution columns to show that your addition, so far, is correct.
3. From the total amount received, subtract the total amount paid out. Record the difference in the "Paid Out" column. On the same line, in the "Explanation" column, write the words, "Cash Balance." (The cash balance should always agree with the amount of money left in the cash box.)
4. Now, draw a single line under the 'Received' and "Paid Out" columns; then add only the figures between the two single lines. If the totals agree, draw a double line under them to show that your subtraction is correct.
5. On the next line, enter the amount of the cash balance in the "Cash Received" column. On the following line, let the records show that you have replenished the Petty Cash Fund with Check No. 505 for an amount needed to bring the fund back up to $25.

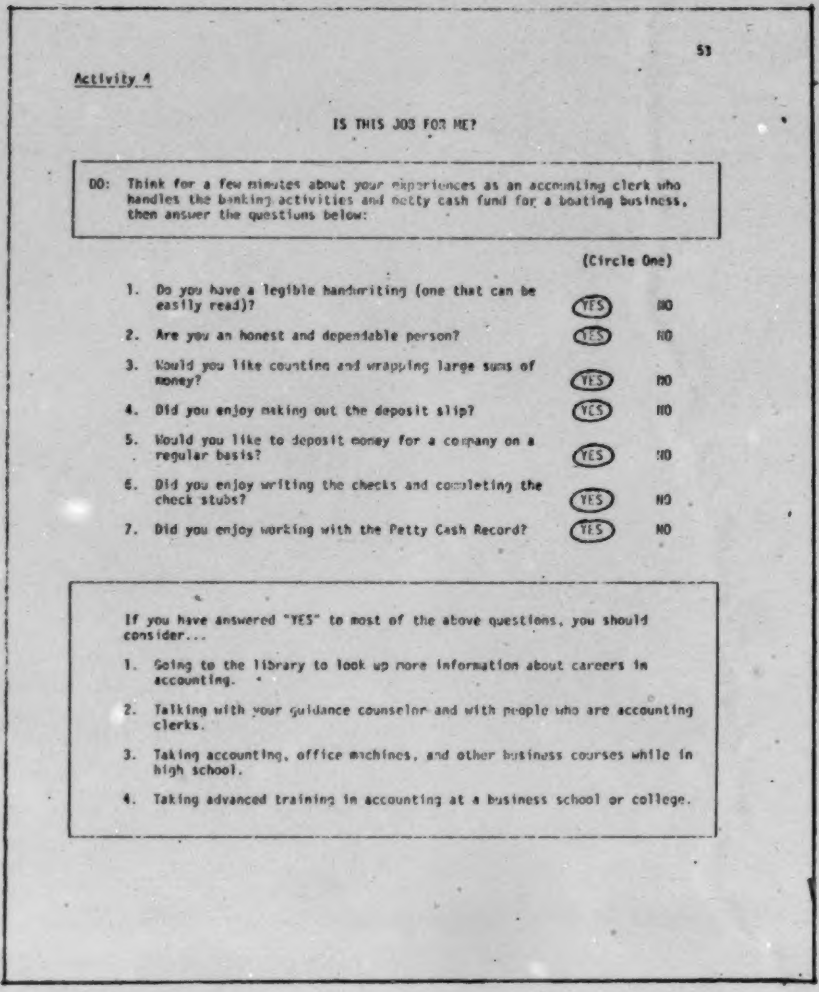
Your students should use the petty cash book on page 52 as a model as they list small cash expenditures for October 16 and 17. Also, they should be able to follow the five procedures listed at the bottom of this page as they prepare the petty cash record for a new "round" of disbursements.

You may want to make and project a transparency of a completed petty cash record for October 15 through October 17, so that your students may check their own work.

KEY - UNIT 2

IS THIS JOB FOR ME?

Activity 4:



53

Activity 4

IS THIS JOB FOR ME?

DO: Think for a few minutes about your experiences as an accounting clerk who handles the banking activities and petty cash fund for a boating business, then answer the questions below:

(Circle One)

1. Do you have a legible handwriting (one that can be easily read)? [✓ YES] NO
2. Are you an honest and dependable person? [✓ YES] NO
3. Would you like counting and wrapping large sums of money? [✓ YES] NO
4. Did you enjoy making out the deposit slip? [✓ YES] NO
5. Would you like to deposit money for a company on a regular basis? [✓ YES] NO
6. Did you enjoy writing the checks and completing the check stubs? [✓ YES] NO
7. Did you enjoy working with the Petty Cash Record? [✓ YES] NO

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are accounting clerks.
3. Taking accounting, office machines, and other business courses while in high school.
4. Taking advanced training in accounting at a business school or college.

Expect individual responses to vary on this sheet. Students who express an interest in the job described in this unit should be encouraged to go to the sources listed in the second box on this page to obtain more information.

UNIT 2

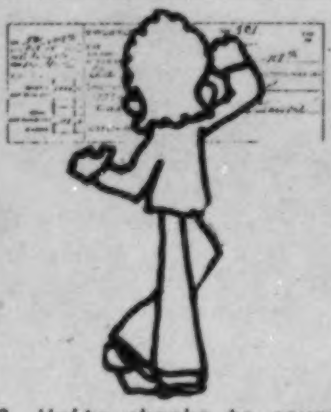
HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN HANDLING THE BANKING ACTIVITIES AND PETTY CASH FUND FOR A BOATING CLUB

As a young boy, James Denison dreamed of someday owning a marina. After graduating from high school, he applied for the job of accounting clerk at the Southern Pacific Boating Club because he would be taking advantage of the business training which he obtained while in high school; and he would have an opportunity to learn something about the operation of such a business.

Within the Accounting Department of the Boating Club, the responsibilities are divided among Ann Jackson, accountant and office supervisor for the Club, and three accounting clerks. One of the accounting clerks keeps a record of all money which comes in and of all money which customers owe the Club. Another keeps a record of the merchandise and equipment which the Club buys on credit and a record of all money which is paid out. Ann Jackson prepares the summary reports which show the net income and net worth of the business. James, whose job you will take for two days, is responsible for handling all of the banking activities and for making payments from the petty cash (small cash) fund.

As you work through the activities of this unit, you will:

1. Prepare a bank deposit slip.



2. Write checks to cover bills.

3. Record cash payments in petty cash record.

Activity 1

HOW AN ACCOUNTING CLERK USES ADDITION WHEN PREPARING COINS, CURRENCY, AND CHECKS FOR DEPOSIT IN A BANK

> An accounting clerk uses addition when checking the daily cash receipts (money taken in) for a business.

The money which James Denison deposits in the bank comes from two sources: from the operations of the various facilities of the Boating Club and from customers who pay their bills by mail.

At the end of each business day, the cashiers of the restuarant, service and supply shops, and the fueling station turn in to James the following items: money bags containing the daily receipts and a "cash bag count" indicating the amount of money in each bag.

First, James checks the amount of money in each bag against the amount shown on the cash bag count. If he finds an error, he immediately notifies the manager who is responsible. When he does not find an error, he makes a record for himself as to the total amount of money which he has received; he signs the cash bag count slips and gives them to the accounting clerk who keeps a record of all money which comes in; then he places the bags containing the money in the safe until the next morning.

Assume that you are taking James' job for two days and that the cashiers are bringing in their day's receipts along with the cash bag counts which are shown below. Check the totals on the slips. If they are correct, sign your name on the lines preceded by "A/C" (for accounting clerk).

Cash Bag Count *Restuarant*	
Date:	
Pennies ...	$ 1.33
Nickels ...	5.35
Dimes ...	2.00
Quarters ...	6.25
Halves ...	1.50
Ones ...	8.00
Fives ...	25.00
Tens ...	40.00
Twenties ...	40.00
TOTAL	$ 129.43
Cashier	Pat Dunn
A/C	

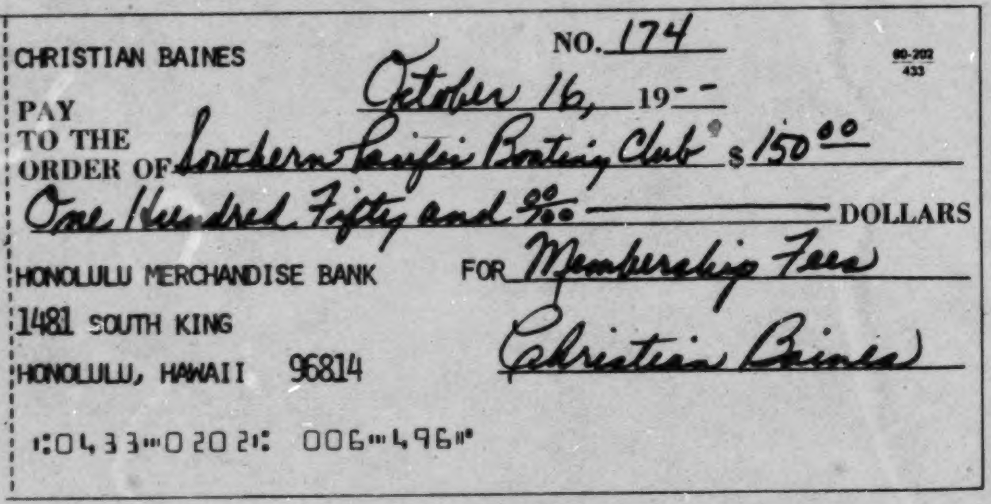
Cash Bag Count *Services & Supplies*	
Date:	
Pennies ...	$ 1.73
Nickels ...	12.25
Dimes ...	9.00
Quarters ...	7.75
Halves ...	3.50
Ones ...	13.00
Fives ...	25.00
Tens ...	30.00
Twenties ...	60.00
TOTAL	$ 162.23
Cashier	Joseph Sass
A/C	

Cash Bag Count *Fueling Station*	
Date:	
Pennies ...	$ 2.37
Nickels ...	14.45
Dimes ...	7.90
Quarters ...	10.25
Halves ...	4.00
Ones ...	16.00
Fives ...	20.00
Tens ...	50.00
Twenties ...	80.00
TOTAL	$ 204.97
Cashier	Ken Moss
A/C	

Activity 1
Page 2

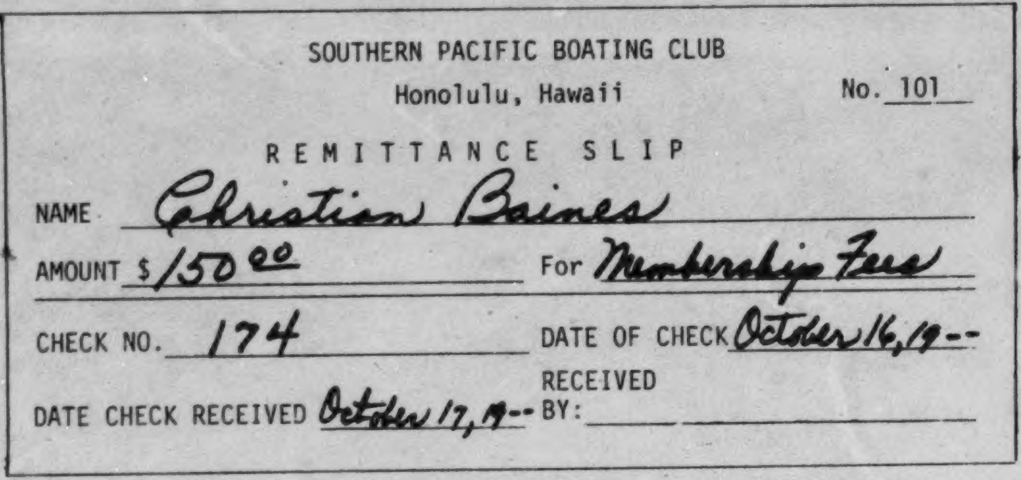
When a customer sends checks or money orders by mail, this is called a remittance (pronounced ree mit'tance).

Each morning, the mail clerk places on James Denison's desk letters containing checks from members who are paying on their annual membership fees and on amounts which they owe the Boating Club for supplies and services. For each check received, James has to prepare a "Remittance Slip" which looks like the one shown at the bottom of the illustration below.



CHRISTIAN BAINES
NO. 174
80-202
433
October 16, 19--
PAY TO THE ORDER OF Southern Pacific Boating Club $150.00
One Hundred Fifty and 00/00 DOLLARS
HONOLULU MERCHANDISE BANK
1481 SOUTH KING
HONOLULU, HAWAII 96814
FOR Membership Fees
Christian Baines
⑆0433⑈0202⑆ 006⑈496⑈

Check Received in Mail



SOUTHERN PACIFIC BOATING CLUB
Honolulu, Hawaii
No. 101
REMITTANCE SLIP
NAME Christian Baines
AMOUNT $150.00
For Membership Fees
CHECK NO. 174
DATE OF CHECK October 16, 19--
DATE CHECK RECEIVED October 17, 19--
RECEIVED BY: ____________

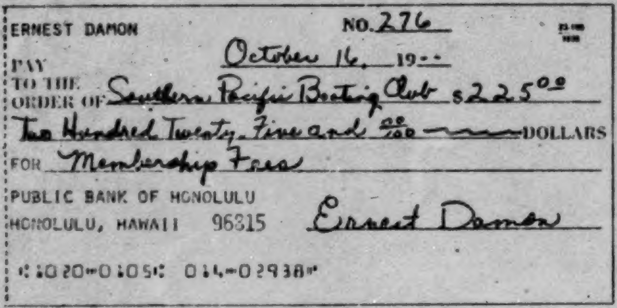
Remittance Slip for Christian Baines' Check

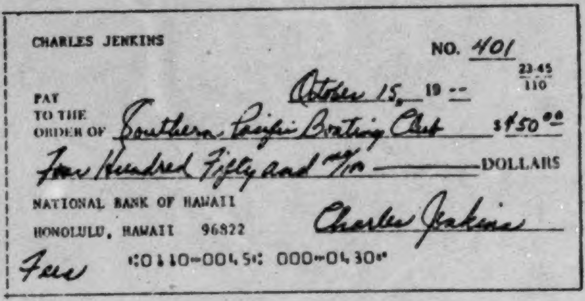
Sign the slip; then complete the tasks on the following page.

Activity 1
Page 3

In actual business practice, remittance slips are given to the accounting clerk who keeps a record of money which customers owe a business; the checks for which they are written are retained or kept by the accounting clerk who will prepare them for deposit in the bank.

Assume that this is October 17, your second day on the job as accounting clerk in charge of banking activities for the Southern Pacific Boating Club and that the mail clerk places three letters containing checks on your desk. One contains the check which is shown on the previous page, and the other two contain the checks which are printed below. Use the forms at the bottom of this page to prepare remittance slips for the checks from Mr. Damon and Mr. Jenkins.


ERNEST DAMON NO. 276
October 16, 19--
PAY TO THE ORDER OF Southern Pacific Boating Club $225.00
Two Hundred Twenty-Five and 00/100 DOLLARS
FOR Membership Fees
PUBLIC BANK OF HONOLULU
HONOLULU, HAWAII 96315
Ernest Damon
:1020-0105: 014-02938"


CHARLES JENKINS NO. 401
23-45/110
October 15, 19--
PAY TO THE ORDER OF Southern Pacific Boating Club $450.00
Four Hundred Fifty and 00/100 DOLLARS
NATIONAL BANK OF HAWAII
HONOLULU, HAWAII 96822
Charles Jenkins
Fees
:0110-0045: 000-0430"

Remittance slips are pre-numbered in consecutive order, and each must be accounted for.

SOUTHERN PACIFIC BOATING COMPANY
of Honolulu, Hawaii No. 102

REMITTANCE SLIP

NAME ____________________
AMOUNT $__________ FOR ____________________
CHECK NO. __________ DATE OF CHECK ____________________
DATE CHECK RECEIVED __________ Received By: __________

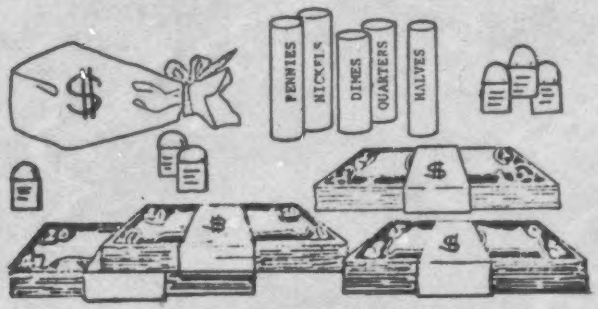
SOUTHERN PACIFIC BOATING COMPANY
of Honolulu, Hawaii No. 103

REMITTANCE SLIP

NAME ____________________
AMOUNT $__________ FOR ____________________
CHECK NO. __________ DATE OF CHECK ____________________
DATE CHECK RECEIVED __________ Received By: __________

The accounting clerk who handles the banking activities for a business should be prepared to work with large amounts of money.

After completing remittance slips, James' usual practice is to remove the money placed in the safe the night before; then he prepares all coins, currency (bills), and checks for deposit.



All coins and bills are sorted according to denomination. For example, pennies are placed in one pile, nickels in another, dimes in a third, and so on. Coins are then rolled in wrappers supplied by the bank. Loose coins are placed in envelopes which are labeled as to amount enclosed and denomination of coin. Bills are banded together according to denomination. Each band indicates the amount of money in the pack.

After coins and currency are wrapped and packaged, James determines the totals for each and enters these amounts on one of the deposit slips used by the Boating Club.

Imagine that it is October 17, your second day on James' job, and that you must deposit the money which you have received from the cashiers. Refer to the cash bag counts on page 43 and determine the total amount received in coins and the total amount in currency. Enter these figures and October 17 in the proper spaces on the form printed below but do not compute the total.

Deposited In 1ST NATIONAL BANK OF HONOLULU

Date ______________

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

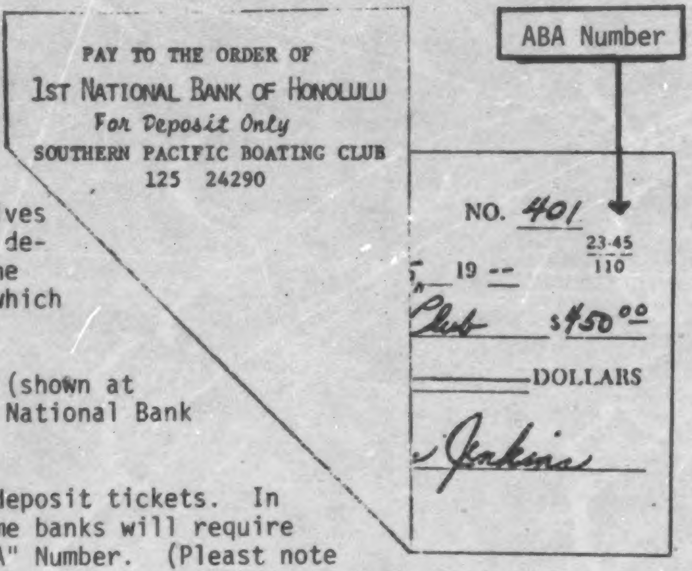
	Dollars	Cents
Currency		
Coin		
Checks . .		
TOTAL		

This deposit accepted under and subject to the provisions of the Uniform Commercial Code.

⑆0710⑈0436⑆ 125⑈24290⑈

The first part of an ABA Number represents the city or state in which a bank is located; the second part is the number assigned to that particular bank; and the third (below the line) refers to the Federal Reserve District in which the bank is situated.

Before a check can be deposited, it must be "endorsed". This means that the name of the individual or business to whom the check is written must be handwritten or stamped on the back of the left end of the check. This action gives the bank (in which the check is being deposited) the legal right to collect the amount of the check from the bank on which it is drawn.


PAY TO THE ORDER OF
1ST NATIONAL BANK OF HONOLULU
For Deposit Only
SOUTHERN PACIFIC BOATING CLUB
125 24290

NO. 401

$\frac{23\text{-}45}{110}$

19 --

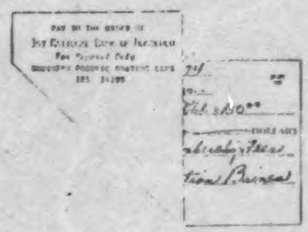
Club $450.00

DOLLARS

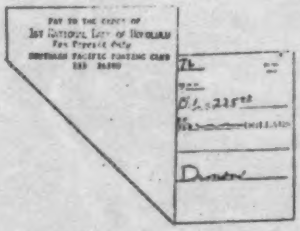
Jenkins

The amount of Mr. Jenkins' check (shown at the right) will be collected from the National Bank of Hawaii.

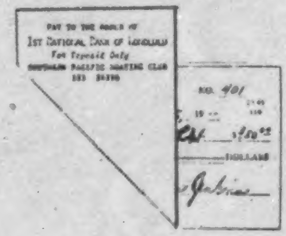
Checks are listed separately on deposit tickets. In addition to the amount of a check, some banks will require that you list the top part of its "ABA" Number. (Pleast note the number in the upper right-hand corner of the endorsed check shown above. (Such numbers are assigned to banks by the American Bankers Association).



ABA NO. $= \frac{60\text{-}202}{433}$



ABA NO. $= \frac{23\text{-}105}{1020}$



ABA NO. $= \frac{23\text{-}45}{110}$

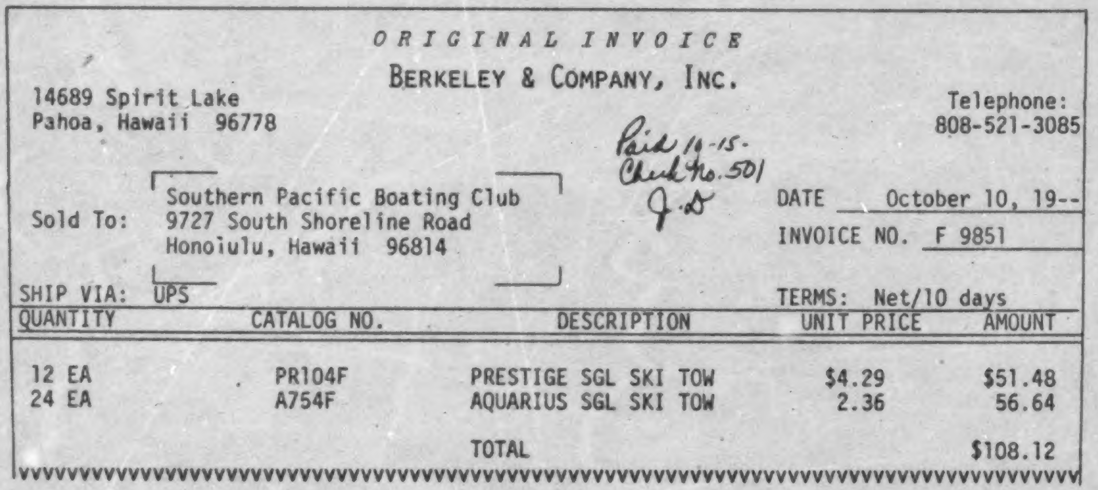
Imagine that you have used the company stamp to endorse each of the checks which you have received. List each, separately by upper portion of the ABA Number, on the deposit slip on the previous page. Then, determine the total amount that you are depositing.

Activity 2

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN PAYING BILLS BY CHECK

A deposit in an account is always added to the checkbook balance; amounts of checks paid out are always subtracted.

Before James Denison left the office on October 15, the bill, shown in the first illustration, was placed on his desk. The check stub, which is partially filled out, and the check which he wrote are pictured in the second illustration.



ORIGINAL INVOICE

BERKELEY & COMPANY, INC.

14689 Spirit Lake
Pahoa, Hawaii 96778

Telephone:
808-521-3085

Paid 10-15-
Check No. 501
J.D.

Sold To:
Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96814

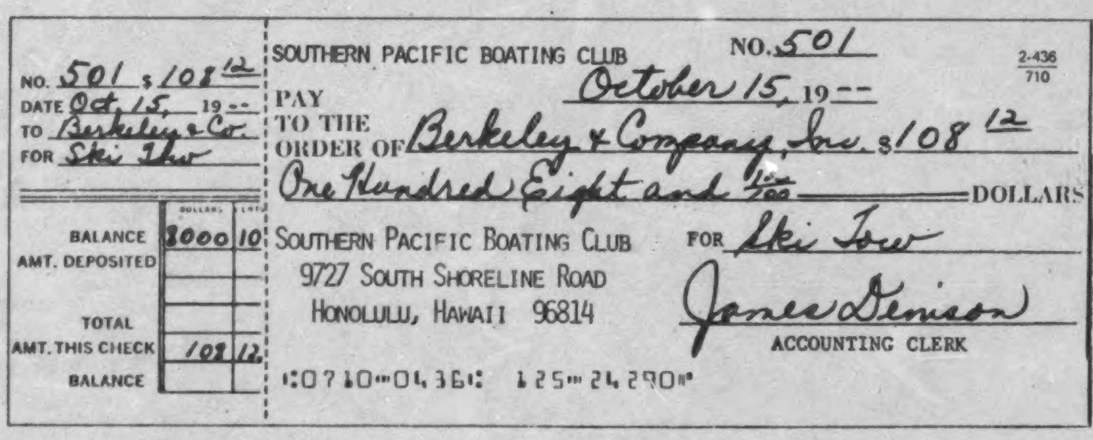
DATE October 10, 19--

INVOICE NO. F 9851

SHIP VIA: UPS

TERMS: Net/10 days

QUANTITY	CATALOG NO.	DESCRIPTION	UNIT PRICE	AMOUNT
12 EA	PR104F	PRESTIGE SGL SKI TOW	$4.29	$51.48
24 EA	A754F	AQUARIUS SGL SKI TOW	2.36	56.64
		TOTAL		$108.12



NO. 501 $ 108 12
DATE Oct. 15, 19--
TO Berkeley & Co.
FOR Ski Tow

	DOLLARS	CENTS
BALANCE	8000	10
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK	108	12
BALANCE		

SOUTHERN PACIFIC BOATING CLUB NO. 501

2-436/710

October 15, 19--

PAY TO THE ORDER OF Berkeley & Company, Inc. $108 12

One Hundred Eight and 12/100 DOLLARS

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

FOR Ski Tow

James Denison
ACCOUNTING CLERK

⑆0710⑈0436⑆ 125⑈24290⑈

Please note that the information at the top of the check stub is the same as that on the top half of the check, and that the amount of the check is written twice--once in figures behind the dollar sign, then in words on the line before "Dollars". Note, also, how the 12¢ is written on this same line as a fraction of 100 pennies.

Now you must complete the check stub. Refer to the deposit slip on page 46 and enter the total amount in the space following "Amt. Deposited". Add this figure to the beginning balance of $8,000.10; record the total in the proper space; then subtract the amount of the check to obtain the new checkbook balance.

Activity 2
Page 2

When the terms of an invoice or bill read, "Net/10", "Net/20", or "Net/30 days", this means that the total amount must be paid before the end of that number of days from the date on the invoice.

During your second day on the job as accounting clerk for the Southern Pacific Boating Club, you have been given the responsibility of paying the bills shown below. Use the blank checks which are printed on the following page.

THE EVERSHEEN PAINT CO.
7869 KULA
HONOLULU, HAWAII 96820
TELEPHONE: 808-923-2300

SLIP NO. 7856
DATE October 13, 19--
TERMS: Net/30 days

Sold To: Southern Pacific Boating Co.
9727 South Shoreline Road
Honolulu, Hawaii 96814

QTY	SIZE	DESCRIPTION	UNIT PRICE	AMOUNT
20	GALS	Porch and Floor, Lt. Grey	$2.85	$59.30
		Sales Tax		2.30
		PAY THIS AMOUNT		$61.60

INVOICE

WHOLESALE ONLY
COVERT MARINE
14560 Kalia Road
Honolulu, Hawaii 96815

Telephone: 808-431-3000

Date October 13, 19--

SOLD TO: Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii 96815

INVOICE NO. H 80521 S

Shipped Via: Yellowstone-Hawaii

Terms: Net/20 days

QTY	MFG. NO.	COVERT NO.	DESCRIPTION	NET PRICE	EXTENSION
2	12VAM	4710100	Lovett Automatic Pump 12 volt	$40.49	$ 80.98
10	511-2	4525115	Lanosheen Box Bilge Cleaner	.894	8.94
			TOTAL		89.92

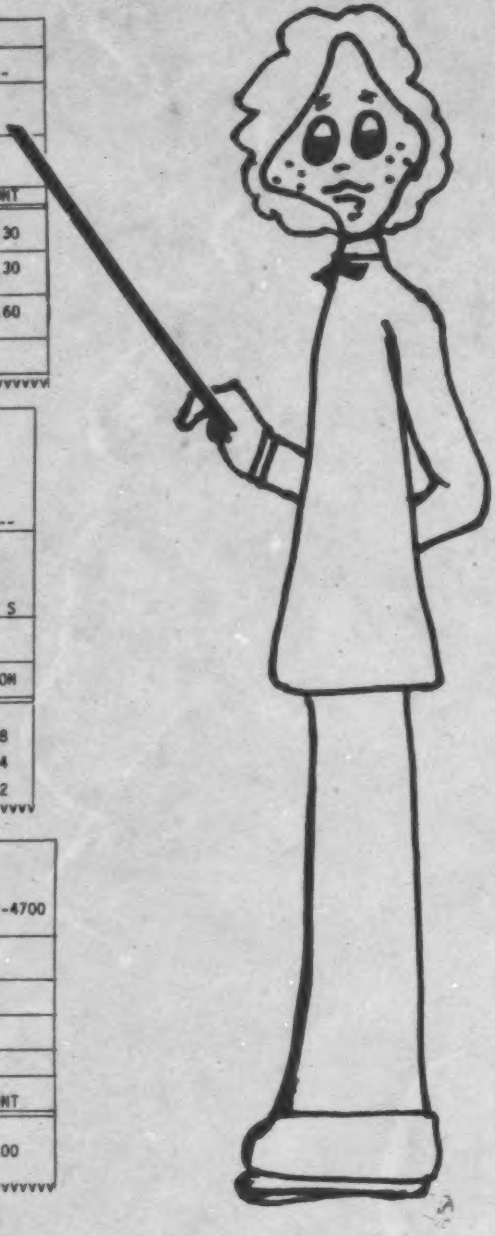
INVOICE
PEARL CITY DISTRIBUTING CO., INC.
Pearl City, Hawaii 96782
Telephone: 808-737-4700

SOLD TO: Southern Pacific Boating Club
9727 South Shoreline Road
Honolulu, Hawaii

DATE: October 14, 19--
INVOICE NO. F 9601
TERMS: Net/30 days

Shipped Via: UPS

QUANTITY		SERIAL NUMBER	DESCRIPTION	NET EACH	AMOUNT
Ordered	Shipped				
1	1	2307	40 HP Norseman Rope S/S Evinrude Motor		$555.00



Activity 2
Page 3

Please refer to page 48. The checkbook balance which you obtained after subtracting the amount of Check No. 501 should be entered as the beginning balance on the first check stub on this sheet. Use the check on that same page as a model as you write checks for each of the bills shown on page 49.

NO. ______ $ ______
DATE ______ 19 ___
TO ______
FOR ______

	DOLLARS	CENTS
BALANCE		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BALANCE		

SOUTHERN PACIFIC BOATING CLUB NO. ______ 2-436/710
PAY ______ 19 ___
TO THE
ORDER OF ______ $ ______
______ DOLLARS

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

FOR ______
______
ACCOUNTING CLERK

⑆0710⑉0436⑆ 125⑈24290⑈

NO. ______ $ ______
DATE ______ 19 ___
TO ______
FOR ______

	DOLLARS	CENTS
BALANCE		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BALANCE		

SOUTHERN PACIFIC BOATING CLUB NO. ______ 2-436/710
PAY ______ 19 ___
TO THE
ORDER OF ______ $ ______
______ DOLLARS

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

FOR ______
______
ACCOUNTING CLERK

⑆0710⑉0436⑆ 125⑈24290⑈

NO. ______ $ ______
DATE ______ 19 ___
TO ______
FOR ______

	DOLLARS	CENTS
BALANCE		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BALANCE		

SOUTHERN PACIFIC BOATING CLUB NO. ______ 2-436/710
PAY ______ 19 ___
TO THE
ORDER OF ______ $ ______
______ DOLLARS

SOUTHERN PACIFIC BOATING CLUB
9727 SOUTH SHORELINE ROAD
HONOLULU, HAWAII 96814

FOR ______
______
ACCOUNTING CLERK

⑆0710⑉0436⑆ 125⑈24290⑈

Activity 3

HOW AN ACCOUNTING CLERK USES ADDITION AND SUBTRACTION WHEN KEEPING A PETTY CASH RECORD

> A petty cash book is used to keep a record of small cash payments.

Inasmuch as banks discourage the writing of checks for small amounts, James Denison keeps on hand a certain amount of money, called a "Petty Cash Fund", to pay for such items as stamps, shipping charges, small donations, and small office supplies. As he places money into this fund and as he takes money out of it to pay for small expenses, he makes a written record on a form which looks like the one below.

PETTY CASH BOOK — Page 1

PETTY CASH FUND				DISTRIBUTION OF PAYMENTS			
Received	Paid Out	DATE	EXPLANATION	Delivery Expense	Office Expense	Postage	Miscellaneous
25 00		19— Oct 7	To establish fund, Check 478				
	1 75	8	Typewriter ribbon		1 75		
	2 50	9	Stamps			2 50	
	4 50	9	Ad in school paper				4 50
	2 40	10	Marking pens		2 40		
	2 00	12	Girl Scout cookies				2 00
	80	12	Carfare for messenger	80			
	3 50	15	Ad in church bulletin				3 50
25 00	17 45	15	Totals	80	4 15	2 50	10 00
	7 55		Cash balance				
25 00	25 00						
7 55		15	Cash balance				
17 45		15	To replenish fund, Check 499				

Please take a minute and read the information on the first line of this form. When James set up the Petty Cash Fund, he wrote a check for $25 which he endorsed and cashed. After placing the money in a small box, labeled "Petty Cash", he made a notation of his action on the first line in the Petty Cash Book in the columns headed "Received", "Date", and "Explanation".

Now, study the information on the second line. On October 8, he paid $1.75 for a typewriter ribbon. Notice that the cost of this ribbon is written twice--once in the "Paid Out" Column and again under "Office Expense" at the right. Please note that all other expenses are handled in the same way.

On October 15, after paying for the ad in the church bulletin, James found that the Petty Cash Fund was getting low and that he needed to "replenish" or put enough money in it to bring the fund back up to $25. How he did this and how he got the Petty Cash Book ready for the next "round" of payments are shown on the last five lines on the record above. Study these lines for a few minutes, then see if you can complete the task on the next page.

Activity 3
Page 2

As shown on the first two lines on the form below, James Denison, before taking a two-day leave from his job, replenished the Petty Cash Form. There was $7.55 left over from the fund which he started on October 7. When he endorsed and cashed check No. 499 for $17.45, there was again $25 in the cash box from which to pay small bills.

PETTY CASH BOOK Page 2

PETTY CASH FUND					DISTRIBUTION OF PAYMENTS			
Received	Paid Out	DATE		EXPLANATION	Delivery Expense	Office Expense	Postage	Miscellaneous
7 55		19-- Oct	15	Cash balance				
17 45			15	Check No. 499				

During your two days as an accounting clerk, the following events happened: On October 16, the messenger needed 80¢ for carfare; the secretary needed 40¢ for mailing labels; and you paid the postman 10¢ for postage due on a letter. On October 17, you paid the newsboy $3.00; the messenger needed $1.60 for carfare; and it cost you $4.75 to replace some light bulbs. Enter these payments in the Petty Cash Book pictured above; then follow the procedures listed below so that your records will show that you have replenished the Petty Cash Fund.

1. On the next available line, in the "Explanation" column, write the word, "Totals"; enter the date in the proper column; then draw a single line under all of the money columns and compute the totals for each of them.
2. On a separate sheet of paper, add together all of the totals for the columns under DISTRIBUTION OF PAYMENTS. If the sum agrees with the total you recorded for the "Paid Out" column, draw a double line under the totals of the distribution columns to show that your addition, so far, is correct.
3. From the total amount received, subtract the total amount paid out. Record the difference in the "Paid Out" column. On the same line, in the "Explanation" column, write the words, "Cash Balance." (The cash balance should always agree with the amount of money left in the cash box.)
4. Now, draw a single line under the "Received" and "Paid Out" columns; then add only the figures between the two single lines. If the totals agree, draw a double line under them to show that your subtraction is correct.
5. On the next line, enter the amount of the cash balance in the "Cash Received" column. On the following line, let the records show that you have replenished the Petty Cash Fund with Check No. 505 for an amount needed to bring the fund back up to $25.

Activity 4

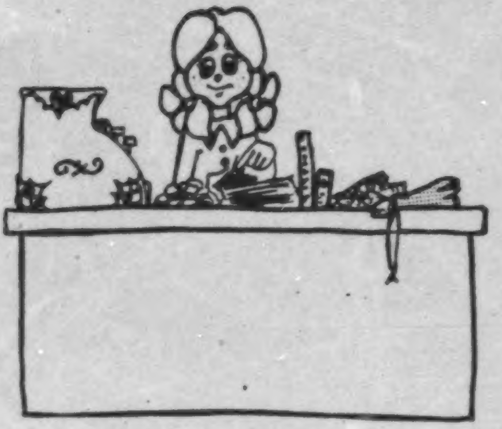
IS THIS JOB FOR ME?

DO: Think for a few minutes about your experiences as an accounting clerk who handles the banking activities and petty cash fund for a boating business, then answer the questions below:

	(Circle One)	
1. Do you have a legible handwriting (one that can be easily read)?	YES	NO
2. Are you an honest and dependable person?	YES	NO
3. Would you like counting and wrapping large sums of money?	YES	NO
4. Did you enjoy making out the deposit slip?	YES	NO
5. Would you like to deposit money for a company on a regular basis?	YES	NO
6. Did you enjoy writing the checks and completing the check stubs?	YES	NO
7. Did you enjoy working with the Petty Cash Record?	YES	NO

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are accounting clerks.
3. Taking accounting, office machines, and other business courses while in high school.
4. Taking advanced training in accounting at a business school or college.



UNIT 3

HOW A CASHIER FOR A RESTAURANT USES ADDITION, SUBTRACTION, AND MULTIPLICATION ON THE JOB

PURPOSE:

In this unit, there is information about the job of a cashier for a restaurant and lounge who must apply skills in addition, subtraction, and multiplication while completing some of the daily tasks.

MAJOR ACTIVITIES:

While working through the activities of this unit, your students will reenforce the basic computational skills mentioned in the above paragraph as they: Complete a "Cash Bag Count", examine three restaurant guest tickets for accuracy, check the contents of the receptacle of a change-making machine, and complete a "Proof of Cash" form.

Before Class Begins:

1. Duplicate and assemble enough copies of the student simulation packet (pages 69 through 76) to provide each student with a set.
2. Make transparencies of the illustrations on pages 65 through 68.
3. Read the "General Information About Cashiers," which is on page 57; scan the Keys which begin on page 58; then read through the suggested teacher-class dialogue, in the next section, which may accompany the presentation of the transparencies.

During Class:

1. Distribute the simulation packets. Direct your students to read the information on the introductory page (69); then have them turn the packets face down on their desks.
2. Project the transparency of Sketch "A." Guide a short discussion which may include the following:

During Class:

2. (continued)

Teacher: It is the beginning of the working day for the cashier in this illustration. What do you think she is doing?

Class: *She is counting money. Or, she is "proving" the change from the cash bag before putting it in the cash drawer of the cash register.*

Teacher: Why is she counting the money before putting it in the cash drawer?

Class: *She wants to be sure that she has received the correct amount of change to begin her day's work. Also, she wants to be sure of the amount of money that she has at the beginning of the day so that, at the end of the day, she can determine how much she has taken in.*

3. Have your students turn their packets face up and only work through Activity 1. To assist them, you may want to have them note the amount of money written on the cash bag, and you may have to explain to your students how to use the table in the lower left illustration to determine the amount of money in each of the "rolls".

4. While your students are working, project the transparency of Sketch "B". When they are ready, guide the second short discussion:

Teacher: When a customer presents a guest ticket and tenders or offers money in payment, what does the cashier do?

Class: *The cashier probably checks the ticket to see whether the addition is correct and then makes change.*

Teacher: Why should the cashier check the addition on the ticket?

Class: *The waiter or waitress may have made an error.*

Teacher: When making change, a cashier should give the least number of coins and bills to a customer. What does this mean?

Class: *This means that the cashier should give in change the largest possible denomination of coins and bills. For example, a quarter should be given in change instead of five nickels.*

5. Have your students work through Activity 2, on page 71. While they are busy, project the transparency of Sketch "C." When your students are ready, guide a third short discussion:

Teacher: How many of you have seen a change-making or change disbursing machine being used by a cashier?

Class: *(Hands are raised.)*

Teacher: How does it operate?

Class: *The cashier presses a key on the change-making machine which releases the correct amount of coins into a receptacle in front of a customer.*

During Class:

5. (continued)

Teacher: When using a change-making machine, the cashier should check to see if the correct amount in coins is being delivered to the customer. Why is this necessary?

Class: The cashier may have pressed the wrong key.

6. Have students work through Activity 3, on pages 72 and 73. While they are busy, project the transparency of Sketch "D." When ready, guide your students through a fourth discussion.

Teacher: At the end of the day, what do you think a cashier does first?

Class: The cashier takes the money out of the cash register and counts it.

Teacher: What does a cashier do with the change bag?

Class: The cashier probably puts enough change in it to begin the next day's work.

Teacher: Then, what happens to the change bag?

Class: It is probably placed in a safe.

Teacher: What is done with the rest of the money?

Class: It is counted, "proved," deposited in the bank, or turned over to the owner or manager of the business.

Teacher: As you work through Activity 4, you will find out what the cashier at the Beef Baron Restaurant does at the end of her working day.

7. Have students work through Activities 4 and 5. When they complete both exercises, review the entire unit with them. Check answers and discuss any items listed on the keys to the activities.

OPTIONAL ACTIVITIES:

1. Class Discussion:

Some of your students may have friends or relatives who are cashiers. If so, have them relate to the class some of the duties performed by these people which are not mentioned in this unit.

2. Group Interview:

Invite a young cashier to visit your class; then have your students use the technique described in Appendix C as they interview this person.

GENERAL INFORMATION ABOUT CASHIERS

Although job titles differ according to the type of organization for which they work, the employees of a business who receive and disburse (pay out) money are called "cashiers." In banks and in some utility companies, they are known as "tellers." In some large corporations, those who perform this function are called "disbursement clerks." In theaters, they are referred to as "box office cashiers"; and in supermarkets, they are called "checkout clerks" or "grocery checkers."

Generally, regardless of job title, a cashier receives payments made by customers, uses a cash register, makes change, and proves or checks the cash in the cash drawer of a cash register at the end of a business day. Other duties depend upon the nature of the business organization for which a cashier works. For example, a cashier in a restaurant may have to seat customers, handle reservations for meals, type menus, and prepare cash and checks for deposit in a bank. Cashiers in hotels and motels may use an accounting-type machine to record charges for telephone calls, car pickup and delivery, and other bills which a guest may incur. And, cashiers in supermarkets, in the absence of a person hired for this purpose, may have to wrap and bag purchases.

Training and Special Skills Required:

Cashiers are usually high school graduates who have been trained by their employers or who have taken such courses as retail selling, office machines, bookkeeping, and typewriting while in high school. Those who have experienced a degree of success are honest, dependable, fast, and accurate when working with figures, and are pleasant, tactful, and poised when serving customers.

Opportunities for Advancement:

A promotion to a supervisory position is possible for a cashier who has leadership ability and who obtains, from a business school or college, training in accounting and business management.

Employment Outlook, Working Conditions, and Salaries:

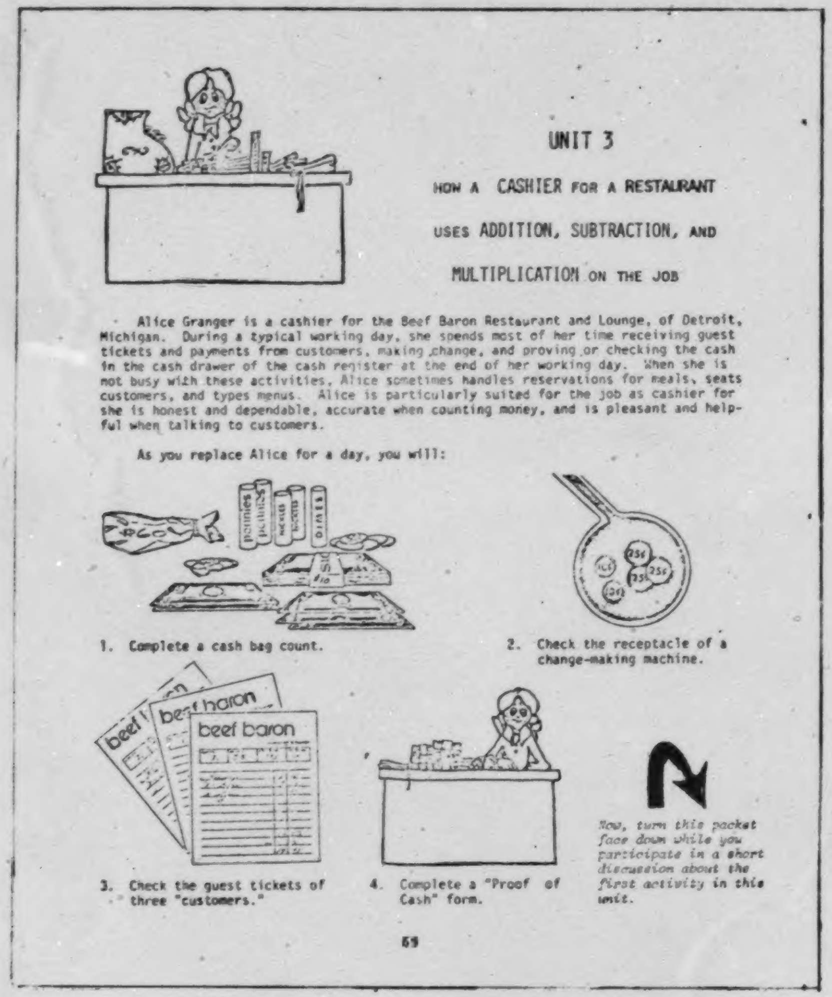
Over the next ten years, the need of businesses for cashiers is expected to increase. Annually, around 75,000 are needed to fill newly created jobs and to replace employees who retire, resign, or who move to other types of positions.

Hours required on the job, days worked, salaries earned, and general working conditions depend upon the nature and size of the organization for which a cashier works.

KEY - UNIT 3

HOW A CASHIER FOR A RESTAURANT USES ADDITION, SUBTRACTION AND MULTIPLICATION ON THE JOB

Introductory Page of Student Packet:



UNIT 3

HOW A CASHIER FOR A RESTAURANT USES ADDITION, SUBTRACTION, AND MULTIPLICATION ON THE JOB

Alice Granger is a cashier for the Beef Baron Restaurant and Lounge, of Detroit, Michigan. During a typical working day, she spends most of her time receiving guest tickets and payments from customers, making change, and proving or checking the cash in the cash drawer of the cash register at the end of her working day. When she is not busy with these activities, Alice sometimes handles reservations for meals, seats customers, and types menus. Alice is particularly suited for the job as cashier for she is honest and dependable, accurate when counting money, and is pleasant and helpful when talking to customers.

As you replace Alice for a day, you will:

1. Complete a cash bag count.
2. Check the receptacle of a change-making machine.
3. Check the guest tickets of three "customers."
4. Complete a "Proof of Cash" form.

Now, turn this packet face down while you participate in a short discussion about the first activity in this unit.

69

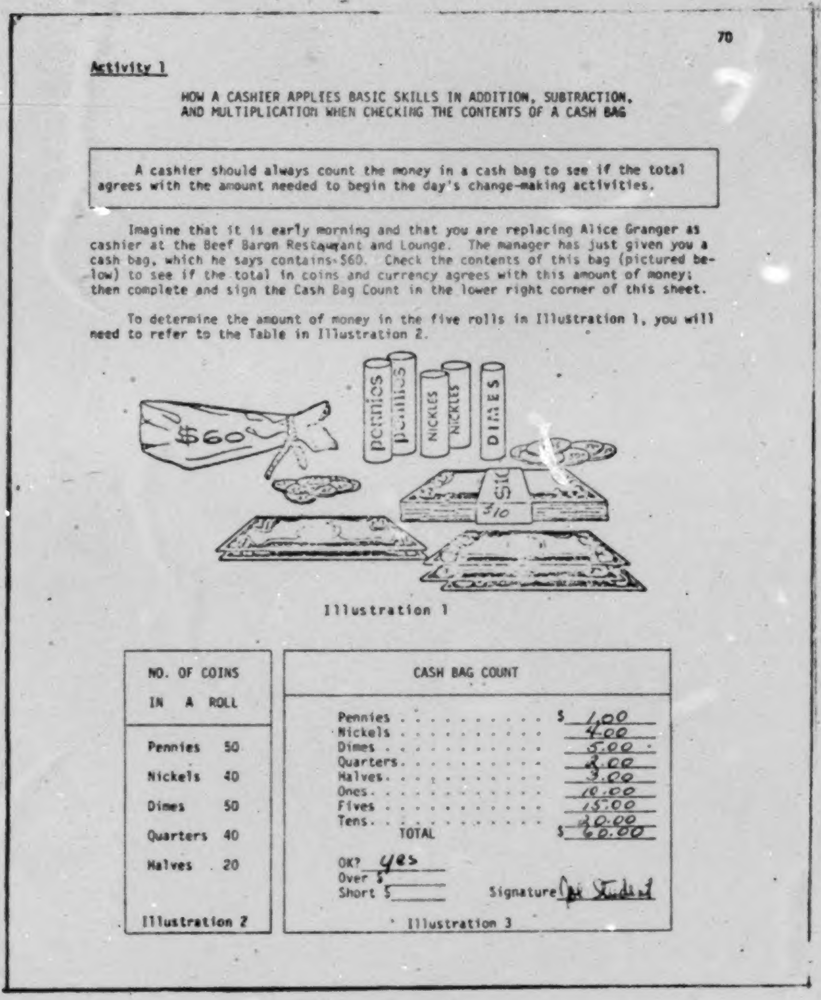
Ask your students to read through the information on this sheet, then have them place the packets face down on their desks. Should they have questions about some of the terms used on this page, you may provide answers at the time; or you may tell them that the meanings of any unfamiliar words will become clear to them as they discuss the illustrations on the transparencies that will be projected and as they work through the activities of this unit.

Project the transparency of Sketch "A"; guide a short discussion such as the one described at the top of page 55; then have your students complete Activity 1.

KEY - UNIT 3

HOW A CASHIER APPLIES BASIC SKILLS IN ADDITION, SUBTRACTION, AND MULTIPLICATION WHEN CHECKING THE CONTENTS OF A CASH BAG

Activity 1:


70
$60
pennies
pennies
NICKLES
NICKLES
DIMES
$10

Activity 1

HOW A CASHIER APPLIES BASIC SKILLS IN ADDITION, SUBTRACTION, AND MULTIPLICATION WHEN CHECKING THE CONTENTS OF A CASH BAG

A cashier should always count the money in a cash bag to see if the total agrees with the amount needed to begin the day's change-making activities.

Imagine that it is early morning and that you are replacing Alice Granger as cashier at the Beef Baron Restaurant and Lounge. The manager has just given you a cash bag, which he says contains $60. Check the contents of this bag (pictured below) to see if the total in coins and currency agrees with this amount of money; then complete and sign the Cash Bag Count in the lower right corner of this sheet.

To determine the amount of money in the five rolls in Illustration 1, you will need to refer to the Table in Illustration 2.

Illustration 1

NO. OF COINS IN A ROLL	
Pennies	50
Nickels	40
Dimes	50
Quarters	40
Halves	20

Illustration 2

CASH BAG COUNT

Pennies	$ 1.00
Nickels	4.00
Dimes	5.00
Quarters	2.00
Halves	3.00
Ones	10.00
Fives	15.00
Tens	20.00
TOTAL	$ 60.00

OK? yes
Over $
Short $
Signature Any Student

Illustration 3

To arrive at a correct count of the money displayed in the illustration on this sheet, your students will have to use the table in the lower left corner.

After checking answers with them, some questions you may ask to stimulate a discussion are:

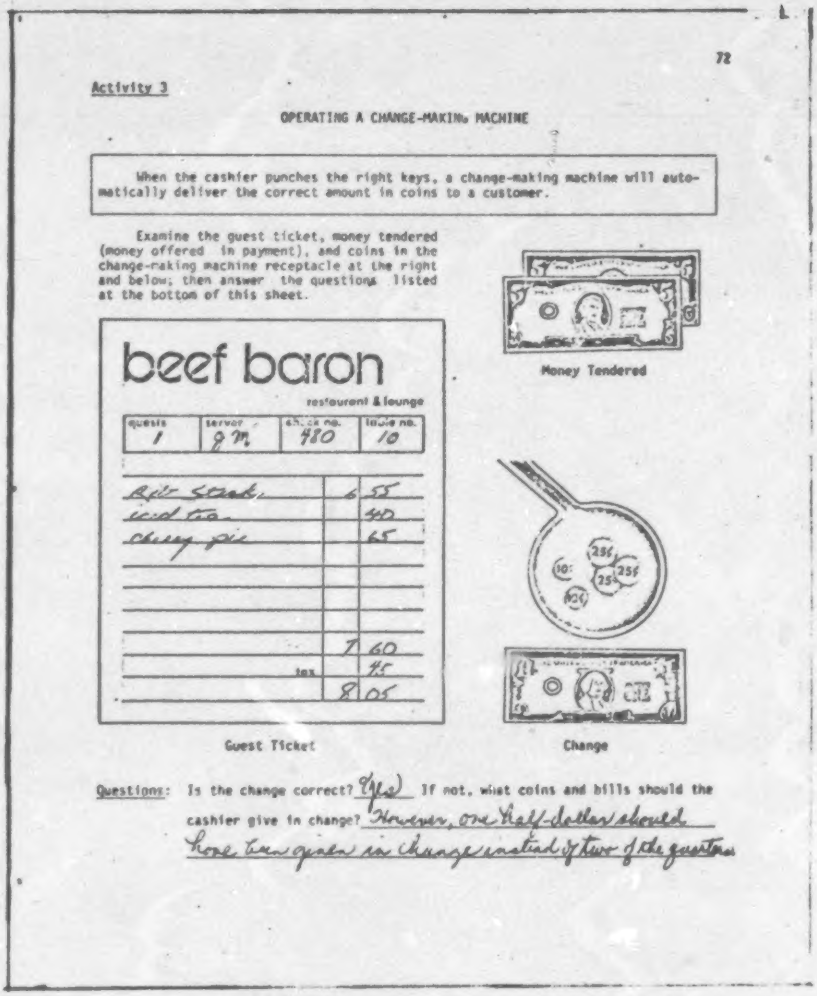
1. What determines the amount of change that is needed by a cashier at the beginning of a working day? *(The volume of business which can be expected during the first two or three hours.)*

2. When checking the contents of a change bag at the beginning of the day, a cashier should be concerned with the amount and with what else? *(The denominations of the coins and bills.)*

KEY - UNIT 3

OPERATING A CHANGE-MAKING MACHINE

Activity 3:



72

Activity 3

OPERATING A CHANGE-MAKING MACHINE

When the cashier punches the right keys, a change-making machine will automatically deliver the correct amount in coins to a customer.

Examine the guest ticket, money tendered (money offered in payment), and coins in the change-making machine receptacle at the right and below; then answer the questions listed at the bottom of this sheet.

beef baron
restaurant & lounge

guests	server	check no.	table no.
1	J.M.	480	10

Rib steak	6	55
iced tea		40
cherry pie		65
	7	60
tax		45
	8	05

Guest Ticket

Money Tendered

Change

Questions: Is the change correct? Yes If not, what coins and bills should the cashier give in change? However, one half-dollar should have been given in change instead of two of the quarters.

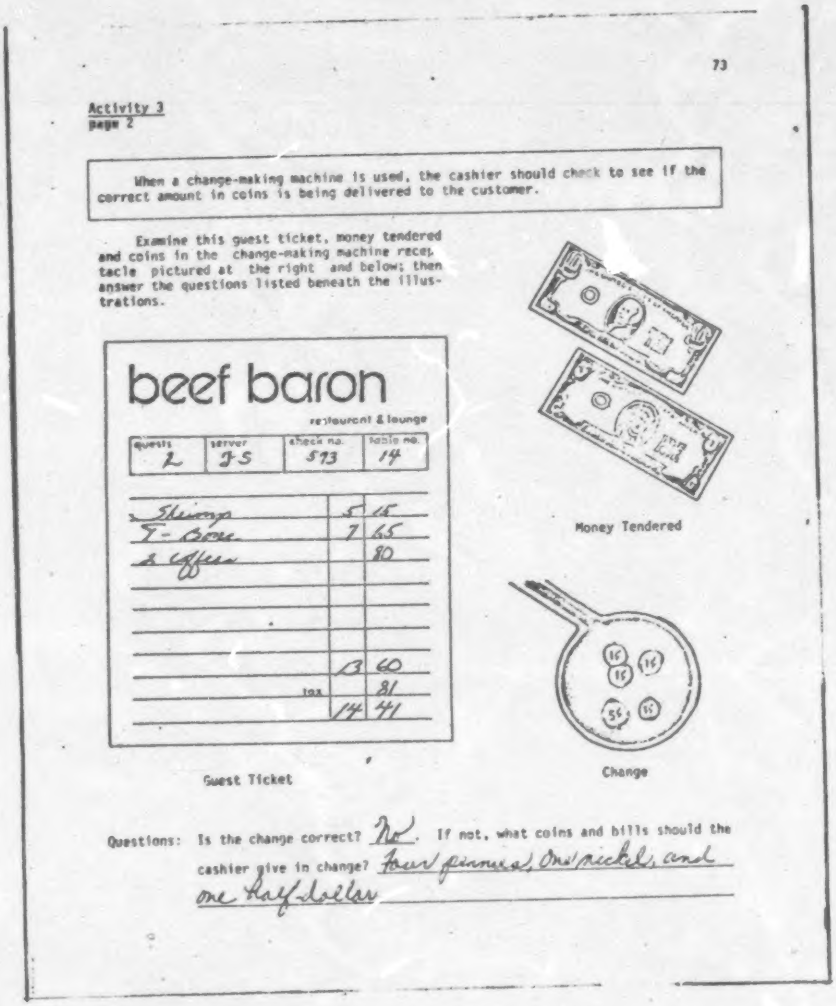
As your students work through this activity, they should check the accuracy of the addition on the guest ticket, note the amount of money tendered by the customer, and then check the coins in the receptacle and the bill beneath it to see if the right amount of change is being returned to the customer.

The amount of the change is correct; however, you may want to raise a question as to whether the least number of coins is being delivered. A half-dollar should replace two of the quarters.

KEY - UNIT 3

OPERATING A CHANGE-MAKING MACHINE

Activity 3, page 2:



73

Activity 3
page 2

When a change-making machine is used, the cashier should check to see if the correct amount in coins is being delivered to the customer.

Examine this guest ticket, money tendered and coins in the change-making machine receptacle pictured at the right and below; then answer the questions listed beneath the illustrations.

beef baron
restaurant & lounge

guests	server	check no.	table no.
2	JS	573	14

Shrimp	5	15
T-Bone	7	65
2 coffee		80
	13	60
tax		81
	14	41

Guest Ticket

Money Tendered

Change

Questions: Is the change correct? No. If not, what coins and bills should the cashier give in change? Four pennies, One nickel, and one half-dollar

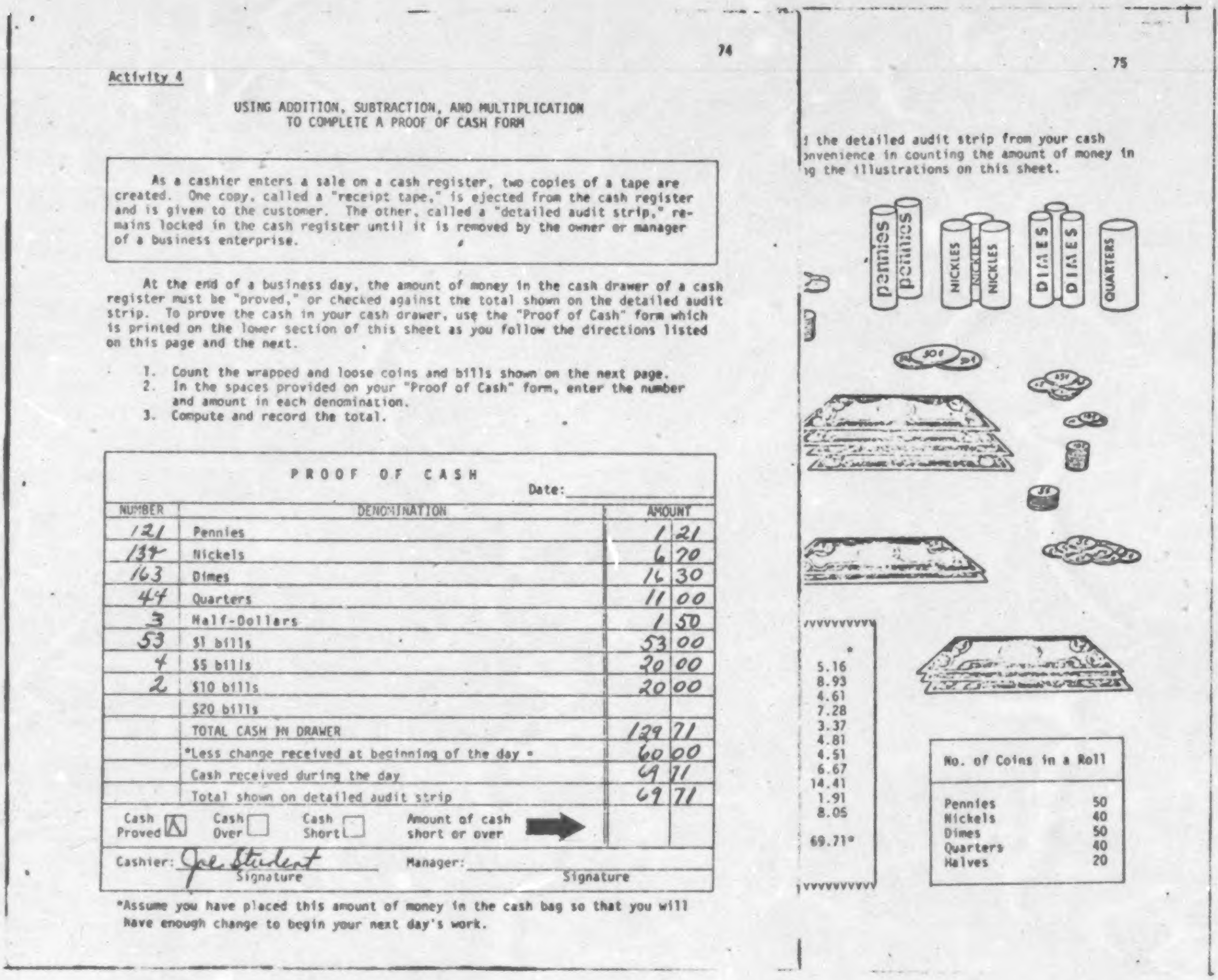
As they work through this exercise, your students will check the accuracy of the addition on a third guest ticket, the money tendered, and the change being returned to the customer.

The addition on the guest ticket is correct; the customer has tendered a sufficient amount of money; however, the amount of change being returned is incorrect. You may explain to your students that such mistakes are easily made and that when using a change-making machine, a cashier should always check the contents of its receptacle.

KEY - UNIT 3

HOW A CASHIER USES ADDITION, SUBTRACTION, AND MULTIPLICATION TO COMPLETE A PROOF OF CASH FORM

Activity 4:



74

Activity 4

USING ADDITION, SUBTRACTION, AND MULTIPLICATION
TO COMPLETE A PROOF OF CASH FORM

As a cashier enters a sale on a cash register, two copies of a tape are created. One copy, called a "receipt tape," is ejected from the cash register and is given to the customer. The other, called a "detailed audit strip," remains locked in the cash register until it is removed by the owner or manager of a business enterprise.

At the end of a business day, the amount of money in the cash drawer of a cash register must be "proved," or checked against the total shown on the detailed audit strip. To prove the cash in your cash drawer, use the "Proof of Cash" form which is printed on the lower section of this sheet as you follow the directions listed on this page and the next.

1. Count the wrapped and loose coins and bills shown on the next page.
2. In the spaces provided on your "Proof of Cash" form, enter the number and amount in each denomination.
3. Compute and record the total.

PROOF OF CASH

Date: ____________

NUMBER	DENOMINATION	AMOUNT	
121	Pennies	1	21
134	Nickels	6	70
163	Dimes	16	30
44	Quarters	11	00
3	Half-Dollars	1	50
53	$1 bills	53	00
4	$5 bills	20	00
2	$10 bills	20	00
	$20 bills		
	TOTAL CASH IN DRAWER	129	71
	*Less change received at beginning of the day *	60	00
	Cash received during the day	69	71
	Total shown on detailed audit strip	69	71
Cash Proved ☒	Cash Over ☐ Cash Short ☐ Amount of cash short or over		

Cashier: Joe Student
Signature

Manager: ____________
Signature

*Assume you have placed this amount of money in the cash bag so that you will have enough change to begin your next day's work.

75

d the detailed audit strip from your cash
onvenience in counting the amount of money in
ng the illustrations on this sheet.

```
    *
  5.16
  8.93
  4.61
  7.28
  3.37
  4.81
  4.51
  6.67
 14.41
  1.91
  8.05

 69.71*
```

No. of Coins in a Roll	
Pennies	50
Nickels	40
Dimes	50
Quarters	40
Halves	20

To correctly complete the "Proof of Cash" form which is printed on this page, your students must read through all of the information and follow the directions which are listed on this page and the next.

To stimulate a class discussion, you might ask:

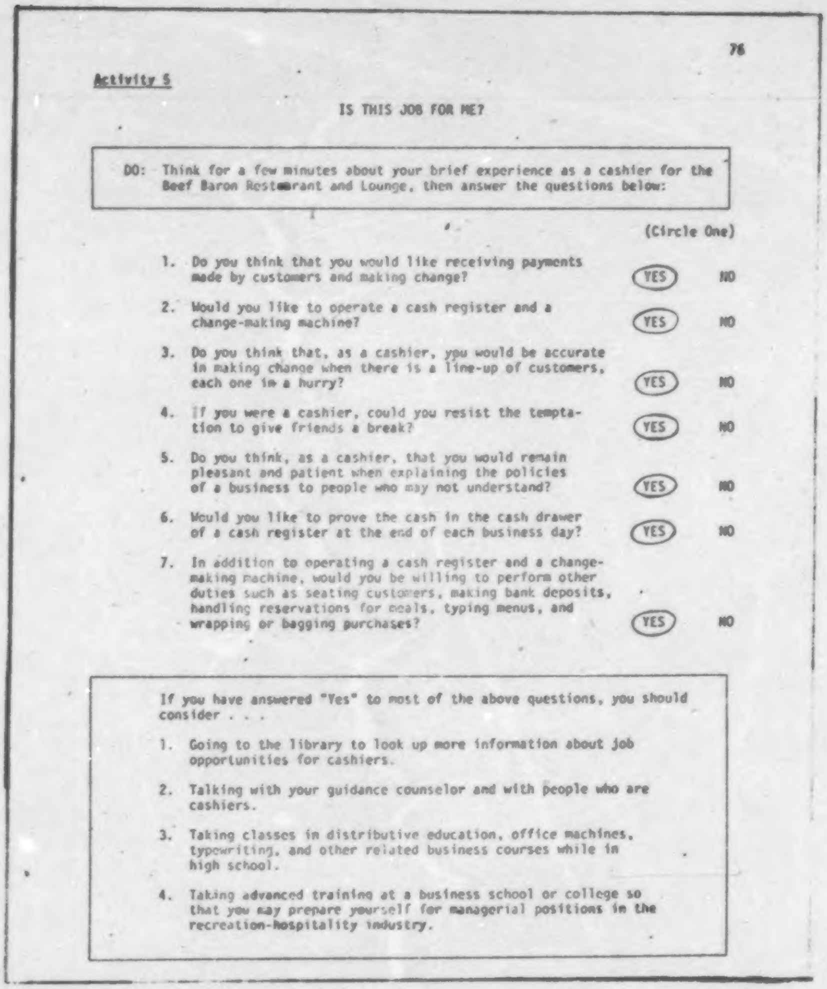
1. What keeps a cashier honest? *(The detailed audit strip which is locked inside the cash register.)*

2. Why is cash ever "over" or "short"? *(When a cashier gives a customer either too little or too much in change.)*

KEY - UNIT 3

IS THIS A JOB FOR ME?

Activity 5:



76

Activity 5

IS THIS JOB FOR ME?

DO: Think for a few minutes about your brief experience as a cashier for the Beef Baron Restaurant and Lounge, then answer the questions below:

(Circle One)

1. Do you think that you would like receiving payments made by customers and making change? [✓ YES] NO
2. Would you like to operate a cash register and a change-making machine? [✓ YES] NO
3. Do you think that, as a cashier, you would be accurate in making change when there is a line-up of customers, each one in a hurry? [✓ YES] NO
4. If you were a cashier, could you resist the temptation to give friends a break? [✓ YES] NO
5. Do you think, as a cashier, that you would remain pleasant and patient when explaining the policies of a business to people who may not understand? [✓ YES] NO
6. Would you like to prove the cash in the cash drawer of a cash register at the end of each business day? [✓ YES] NO
7. In addition to operating a cash register and a change-making machine, would you be willing to perform other duties such as seating customers, making bank deposits, handling reservations for meals, typing menus, and wrapping or bagging purchases? [✓ YES] NO

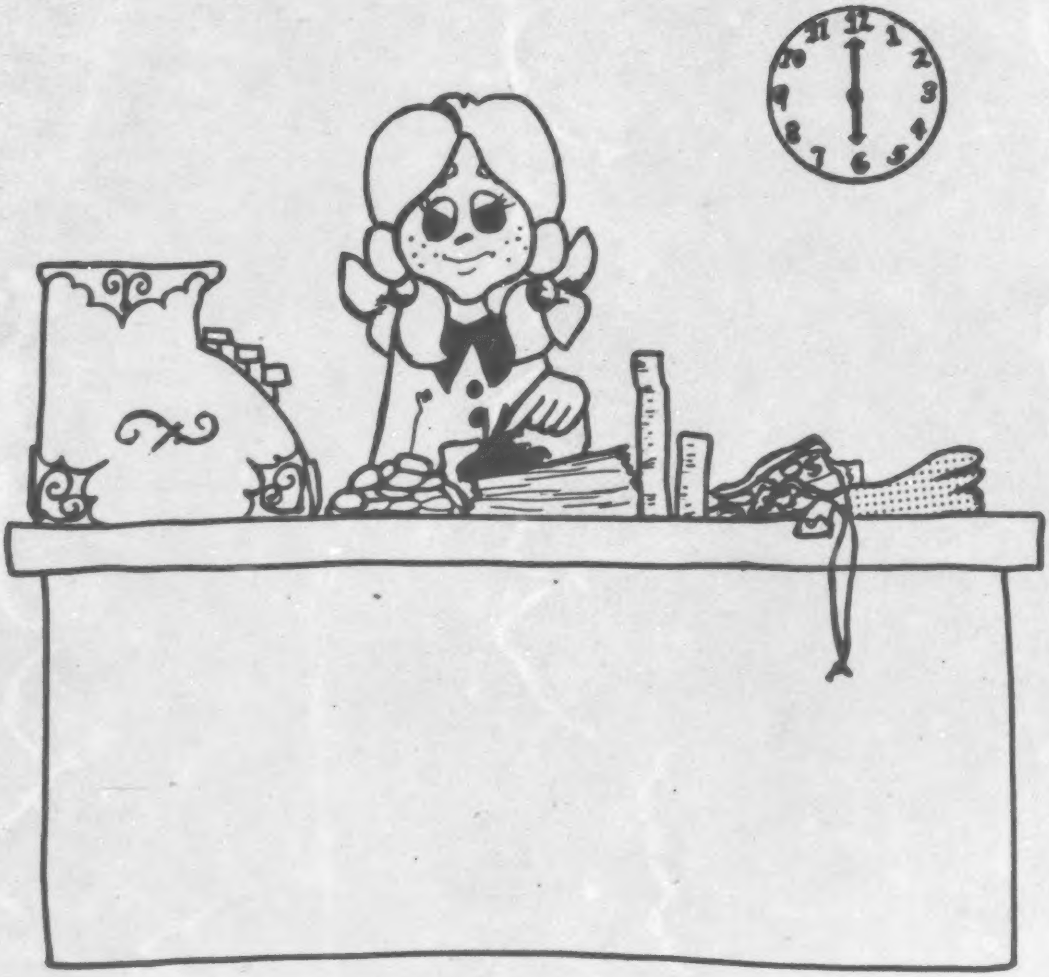
If you have answered "Yes" to most of the above questions, you should consider . . .

1. Going to the library to look up more information about job opportunities for cashiers.
2. Talking with your guidance counselor and with people who are cashiers.
3. Taking classes in distributive education, office machines, typewriting, and other related business courses while in high school.
4. Taking advanced training at a business school or college so that you may prepare yourself for managerial positions in the recreation-hospitality industry.

Students who indicate an interest should be encouraged to seek more information about job opportunities for cashiers. Suggested sources are listed in the box on the lower section on this page.

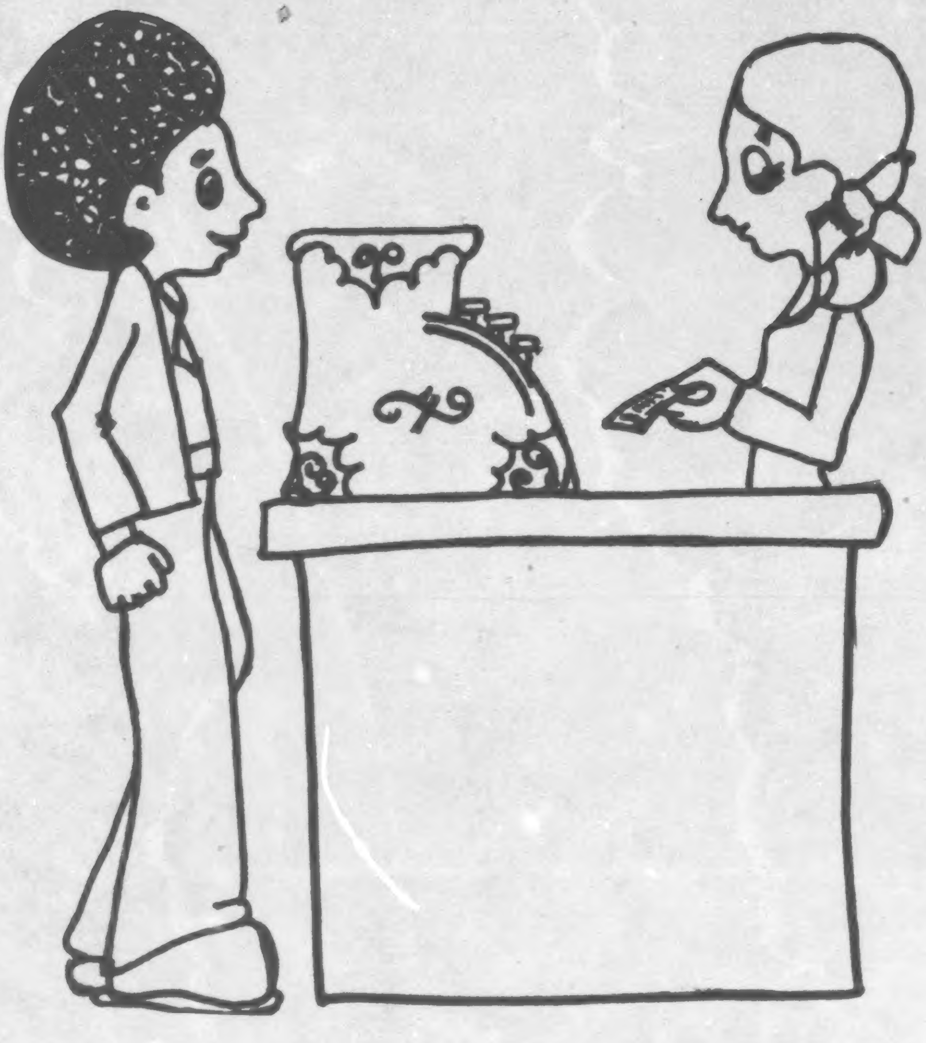
HELLO THERE!

I AM A CASHIER, AND IT IS 6 A.M. CAN YOU GUESS WHAT I'M DOING?


12
1
2
3
4
5
6
7
8
9
10
11

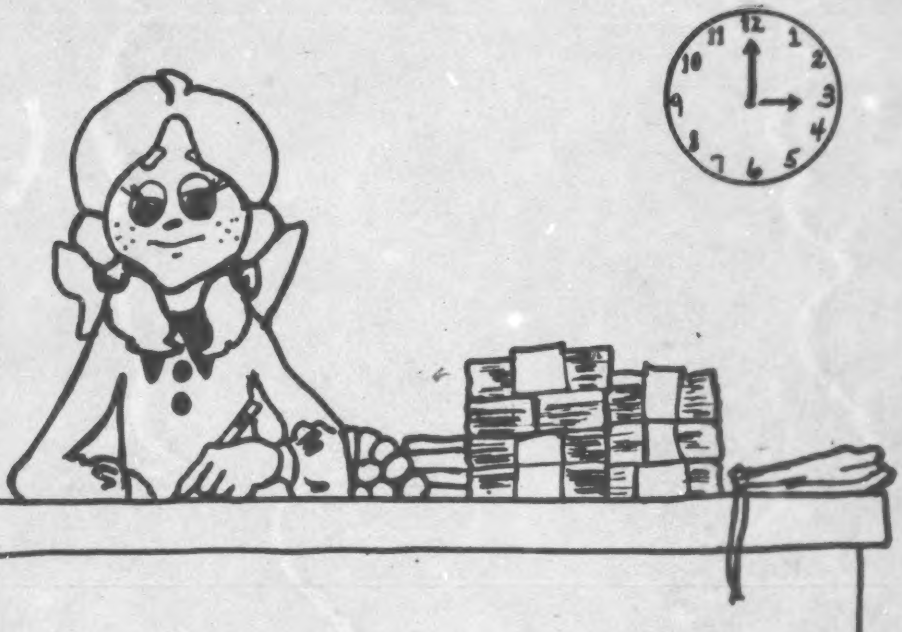
SKETCH A

WHEN A CUSTOMER GIVES ME A GUEST TICKET, WHAT SHOULD I DO FIRST?



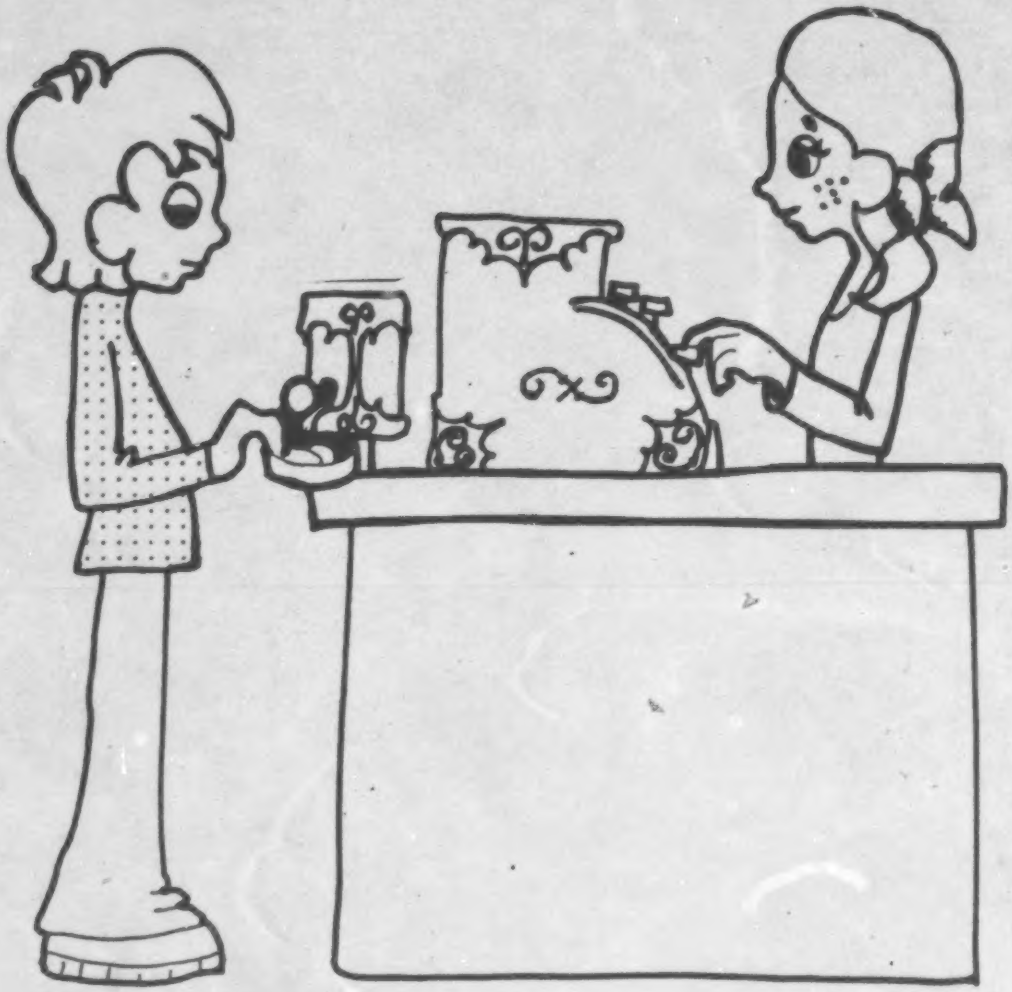
SKETCH B

I'M GOING OFF DUTY FOR THE DAY. WHAT AM I DOING NOW?

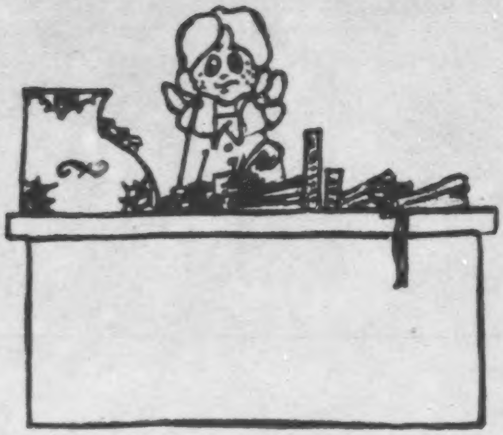

12
1
2
3
4
5
6
7
8
9
10
11

SKETCH D

I AM USING A CHANGE-MAKING MACHINE. DO YOU KNOW HOW IT OPERATES?



SKETCH C

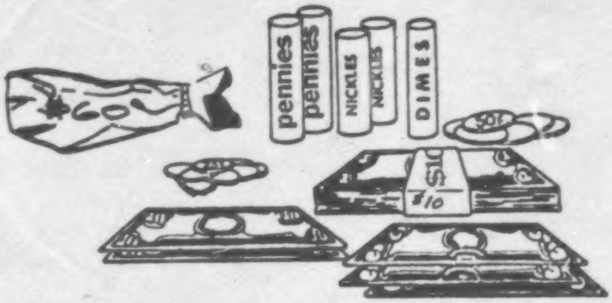


UNIT 3

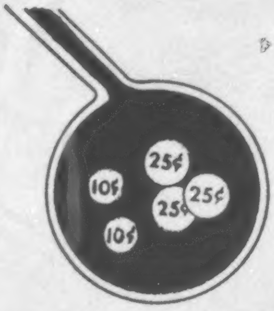
HOW A CASHIER FOR A RESTAURANT USES ADDITION, SUBTRACTION, AND MULTIPLICATION ON THE JOB

Alice Granger is a cashier for the Beef Baron Restaurant and Lounge, of Detroit, Michigan. During a typical working day, she spends most of her time receiving guest tickets and payments from customers, making change, and proving or checking the cash in the cash drawer of the cash register at the end of her working day. When she is not busy with these activities, Alice sometimes handles reservations for meals, seats customers, and types menus. Alice is particularly suited for the job as cashier for she is honest and dependable, accurate when counting money, and is pleasant and helpful when talking to customers.

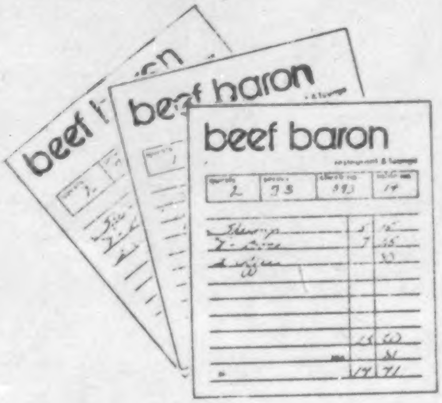
As you replace Alice for a day, you will:



1. Complete a cash bag count.



2. Check the receptacle of a change-making machine.



3. Check the guest tickets of three "customers."

4. Complete a "Proof of Cash" form.

Now, turn this packet face down while you participate in a short discussion about the first activity in this unit.

Activity 1

HOW A CASHIER APPLIES BASIC SKILLS IN ADDITION, SUBTRACTION, AND MULTIPLICATION WHEN CHECKING THE CONTENTS OF A CASH BAG

> A cashier should always count the money in a cash bag to see if the total agrees with the amount needed to begin the day's change-making activities.

Imagine that it is early morning and that you are replacing Alice Granger as cashier at the Beef Baron Restaurant and Lounge. The manager has just given you a cash bag, which he says contains $60. Check the contents of this bag (pictured below) to see if the total in coins and currency agrees with this amount of money; then complete and sign the Cash Bag Count in the lower right corner of this sheet.

To determine the amount of money in the five rolls in Illustration 1, you will need to refer to the Table in Illustration 2.

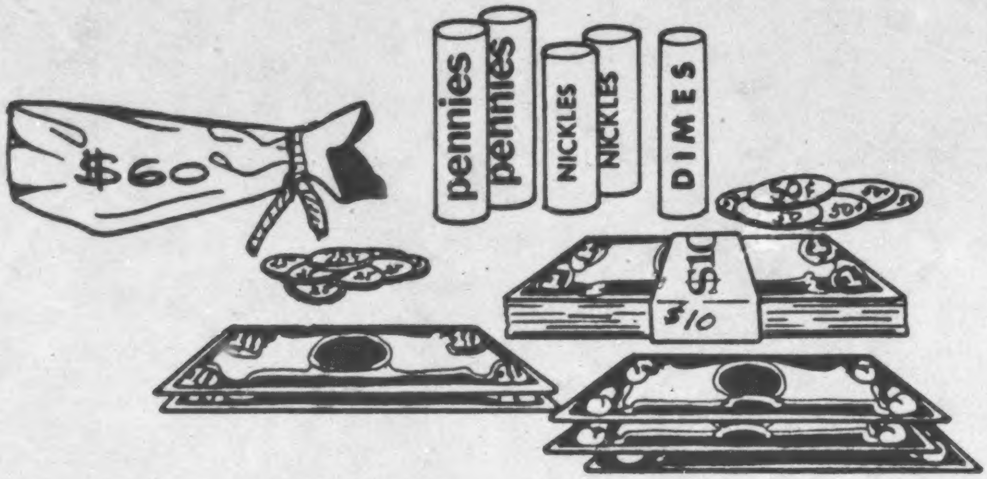


Illustration 1

NO. OF COINS IN A ROLL	
Pennies	50
Nickels	40
Dimes	50
Quarters	40
Halves	20

Illustration 2

CASH BAG COUNT

Pennies	$________
Nickels	________
Dimes	________
Quarters.	________
Halves.	________
Ones.	________
Fives	________
Tens.	________
TOTAL	$________

OK?________
Over $________
Short $_______ Signature____________

Illustration 3

Activity 2

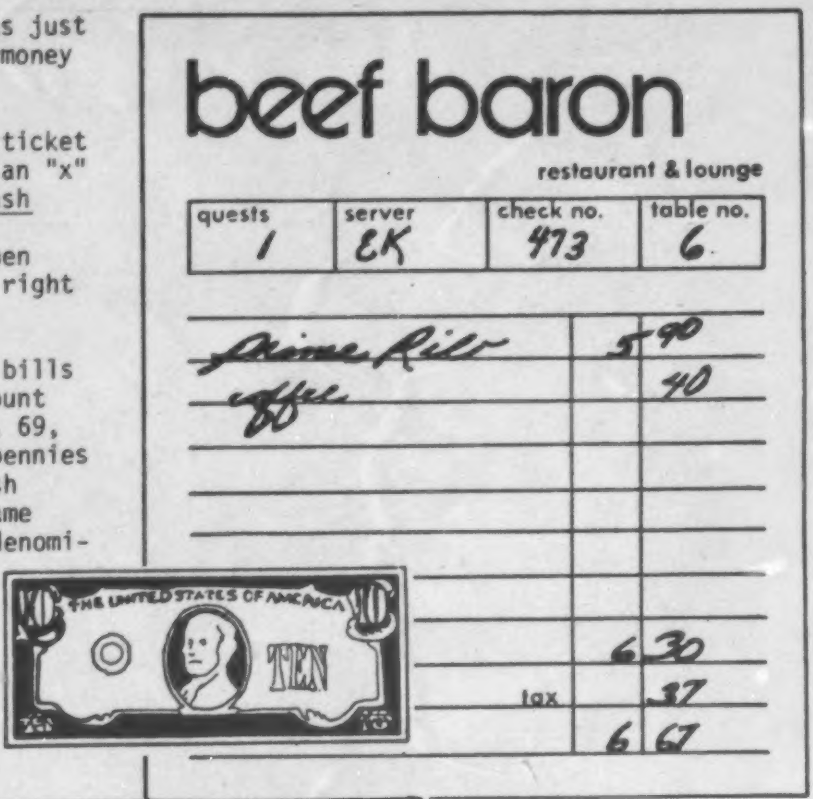
HOW A CASHIER USES ADDITION WHEN CHECKING A GUEST TICKET AND WHEN MAKING CHANGE

When a customer presents a guest ticket, the cashier must examine it to see if the amounts have been added correctly and if the sales tax has been included.

Imagine that a customer has just given you the guest ticket and money shown at the right.

Check the addition on the ticket to see if it is correct; write an "x" on each coin and bill in the cash register drawer that you will give the customer in change; then complete the form in the lower right corner of this sheet.

As you mark the coins and bills in the cash register drawer, count forward. For example, say "68, 69, and 70" as you mark the three pennies in the first section of the cash drawer; then continue in the same fashion as you go to the next denominations.

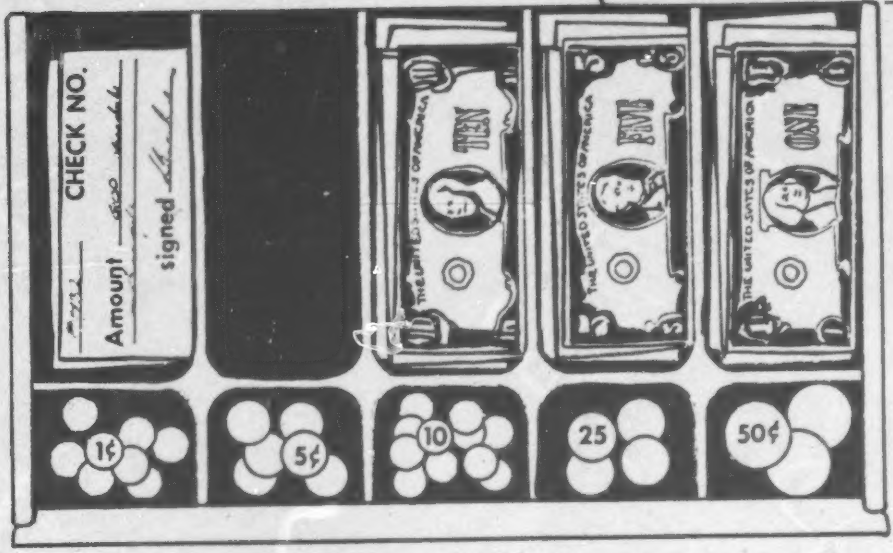


beef baron
restaurant & lounge

guests	server	check no.	table no.
1	EK	473	6

Prime Rib	5	90
coffee		40
	6	30
tax		37
	6	67

THE UNITED STATES OF AMERICA
TEN
10



CASH REGISTER DRAWER

CHANGE GIVEN CUSTOMER

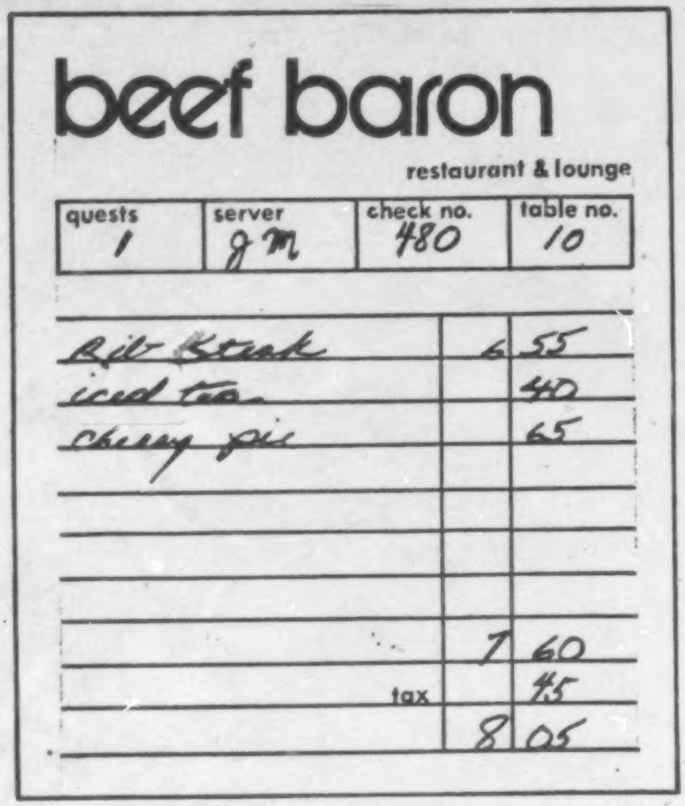
Coin and Bill Denomination	No.
Pennies	
Nickels	
Dimes	
Quarters	
Halves	
Ones	
Fives	
Tens	

Activity 3

OPERATING A CHANGE-MAKING MACHINE

When the cashier punches the right keys, a change-making machine will automatically deliver the correct amount in coins to a customer.

Examine the guest ticket, money tendered (money offered in payment), and coins in the change-making machine receptacle at the right and below; then answer the questions listed at the bottom of this sheet.



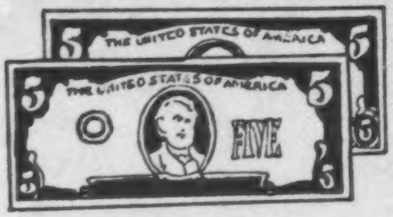
beef baron

restaurant & lounge

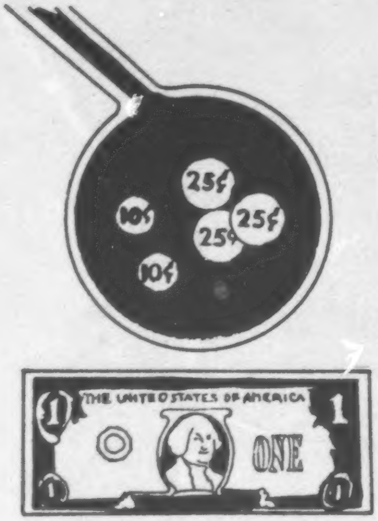
guests	server	check no.	table no.
1	JM	480	10

Rib Steak	6	55
iced tea		40
cherry pie		65
	7	60
tax		45
	8	05

Guest Ticket


THE UNITED STATES OF AMERICA
5
FIVE

Money Tendered


25¢
25¢
25¢
10¢
10¢
THE UNITED STATES OF AMERICA
1
ONE

Change

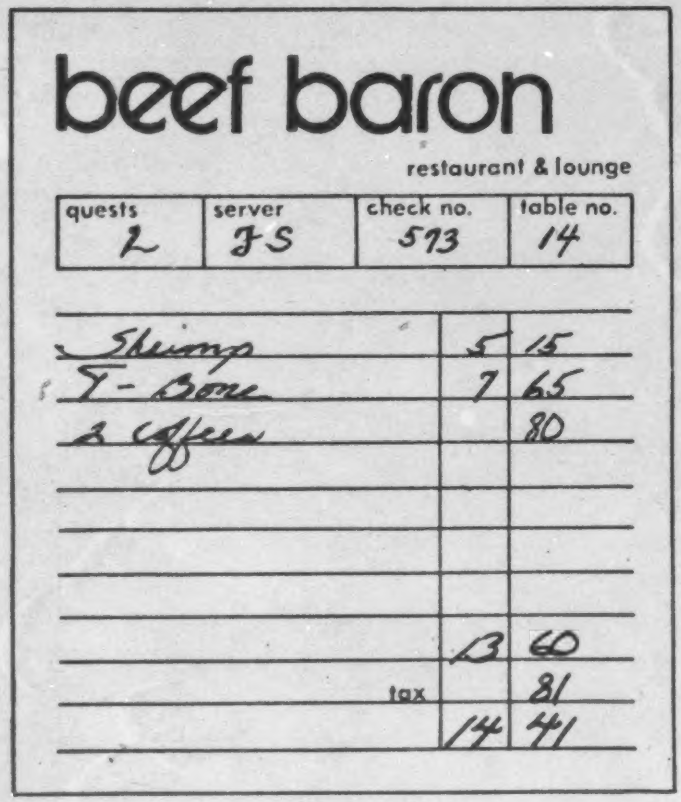
Questions: Is the change correct?______ If not, what coins and bills should the cashier give in change?______________________________

____.

Activity 3
page 2

When a change-making machine is used, the cashier should check to see if the correct amount in coins is being delivered to the customer.

Examine this guest ticket, money tendered and coins in the change-making machine receptacle pictured at the right and below; then answer the questions listed beneath the illustrations.

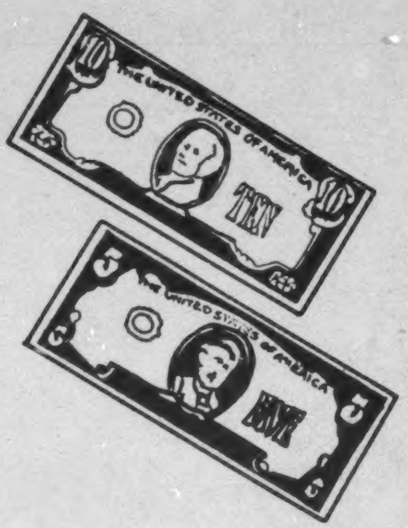


beef baron
restaurant & lounge

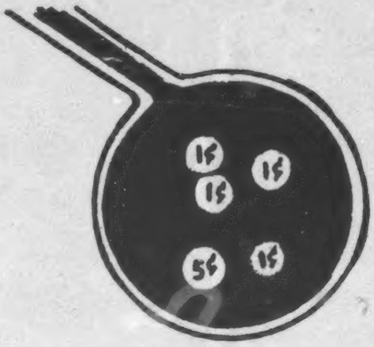
guests	server	check no.	table no.
2	JS	573	14

Shrimp	5	15
T-Bone	7	65
2 Coffee		80
	13	60
tax		81
	14	41

Guest Ticket


THE UNITED STATES OF AMERICA
TEN
10
THE UNITED STATES OF AMERICA
FIVE
5

Money Tendered



Change

Questions: Is the change correct? _____. If not, what coins and bills should the cashier give in change? ____________________

____

Activity 4

USING ADDITION, SUBTRACTION, AND MULTIPLICATION TO COMPLETE A PROOF OF CASH FORM

> As a cashier enters a sale on a cash register, two copies of a tape are created. One copy, called a "receipt tape," is ejected from the cash register and is given to the customer. The other, called a "detailed audit strip," remains locked in the cash register until it is removed by the owner or manager of a business enterprise.

At the end of a business day, the amount of money in the cash drawer of a cash register must be "proved," or checked against the total shown on the detailed audit strip. To prove the cash in your cash drawer, use the "Proof of Cash" form which is printed on the lower section of this sheet as you follow the directions listed on this page and the next.

1. Count the wrapped and loose coins and bills shown on the next page.
2. In the spaces provided on your "Proof of Cash" form, enter the number and amount in each denomination.
3. Compute and record the total.

PROOF OF CASH

Date: ____________

NUMBER	DENOMINATION	AMOUNT	
	Pennies		
	Nickels		
	Dimes		
	Quarters		
	Half-Dollars		
	$1 bills		
	$5 bills		
	$10 bills		
	$20 bills		
	TOTAL CASH IN DRAWER		
	*Less change received at beginning of the day =		
	Cash received during the day		
	Total shown on detailed audit strip		

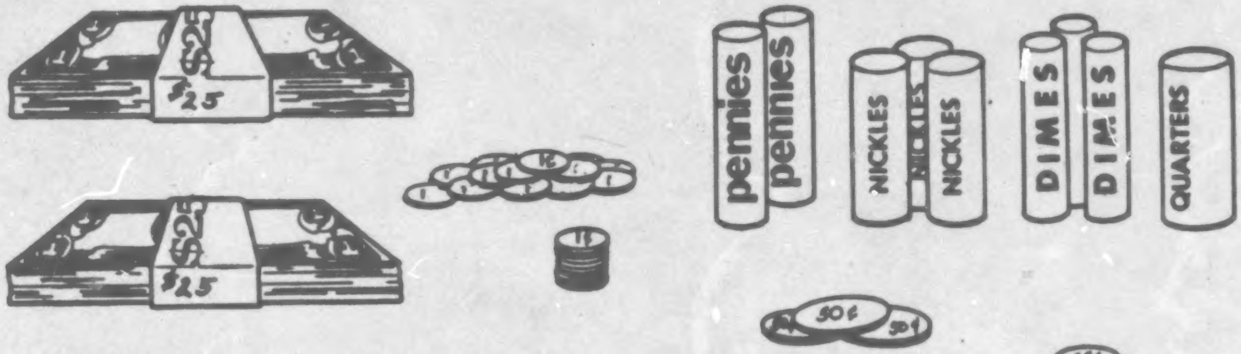
Cash Proved ☐ Cash Over ☐ Cash Short ☐ Amount of cash short or over ➡

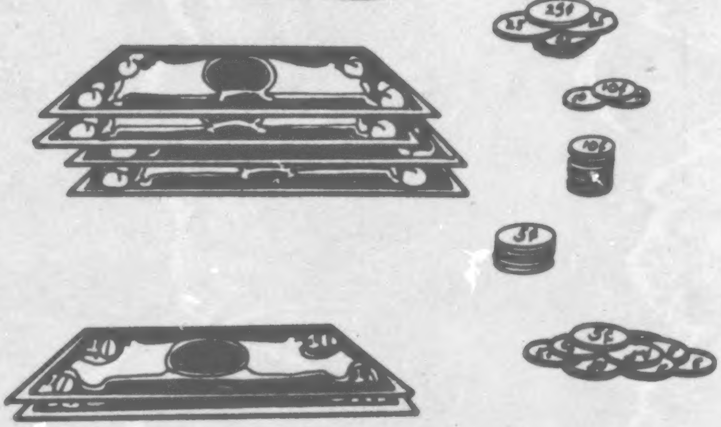
Cashier: ____________ Manager: ____________
Signature Signature

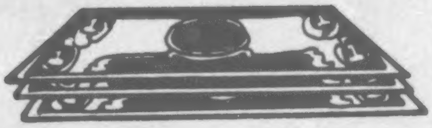
*Assume you have placed this amount of money in the cash bag so that you will have enough change to begin your next day's work.

Activity 4
Page 2

The contents of your cash drawer and the detailed audit strip from your cash register are pictured below. For your convenience in counting the amount of money in the rolls, a table has been included among the illustrations on this sheet.







Now, complete the "Proof of Cash" form on the previous page as you continue with these directions.

4. Refer to your total "Cash Bag Count" on page 70. Enter this as the amount of change which you received at the beginning of the day.
5. To determine the "Cash received during the day," subtract the change received at the beginning of the day from "Total Cash in Drawer."
6. Refer to the "Detailed Audit Strip" at the right and enter the total in the space provided.
7. Compare this amount with "Cash received during the day. If the two figures agree, check the box following "Cash Proved." If they do not, check whether the cash is "Over or "Short" and indicate the amount.
8. Sign the "Proof of Cash" form on the line following "Cashier."

*
5.16
8.93
4.61
7.28
3.37
4.81
4.51
6.67
14.41
1.91
8.05

69.71*

No. of Coins in a Roll	
Pennies	50
Nickels	40
Dimes	50
Quarters	40
Halves	20

Activity 5

IS THIS JOB FOR ME?

DO: Think for a few minutes about your brief experience as a cashier for the Beef Baron Restaurant and Lounge, then answer the questions below:

	(Circle One)	
1. Do you think that you would like receiving payments made by customers and making change?	YES	NO
2. Would you like to operate a cash register and a change-making machine?	YES	NO
3. Do you think that, as a cashier, you would be accurate in making change when there is a line-up of customers, each one in a hurry?	YES	NO
4. If you were a cashier, could you resist the temptation to give friends a break?	YES	NO
5. Do you think, as a cashier, that you would remain pleasant and patient when explaining the policies of a business to people who may not understand?	YES	NO
6. Would you like to prove the cash in the cash drawer of a cash register at the end of each business day?	YES	NO
7. In addition to operating a cash register and a change-making machine, would you be willing to perform other duties such as seating customers, making bank deposits, handling reservations for meals, typing menus, and wrapping or bagging purchases?	YES	NO

If you have answered "Yes" to most of the above questions, you should consider . . .

1. Going to the library to look up more information about job opportunities for cashiers.
2. Talking with your guidance counselor and with people who are cashiers.
3. Taking classes in distributive education, office machines, typewriting, and other related business courses while in high school.
4. Taking advanced training at a business school or college so that you may prepare yourself for managerial positions in the recreation-hospitality industry.

jacie burns
frisco
song

UNIT 4

HOW THE MANAGER OF A SMALL RETAIL SHOP USES MULTIPLICATION ON THE JOB

PURPOSE:

The purpose of this unit is to give students practice in basic mathematics--especially in multiplication--while introducing them to some of the tasks performed by the manager of a small retail business.

MAJOR ACTIVITY:

The major acitivity of this unit is a job simulation in which students take the place of Mike Romaine, manager of the Pop and Rock Record Shop, a small retail record shop that specializes in popular and rock records. The tasks students perform during the simulation require them to use basic mathematics, primarily multiplication, in real-life situations: preparing a purchase order, checking an invoice, and proving cash. The procedures for this activity are as follows:

Before Class Begins:

1. Duplicate and assemble enough copies of the student simulation packet (pages 86-91) to provide each student with a set.

2. Read the "General Information About Small Business Managers." which is on page 79; then scan the teacher's key to the simulation.

During Class:

1. Distribute the simulation packets and read and discuss the introductory pages with students.

2. Ask students to complete the activities on pages 86 through 91. While they are busy with their tasks, you may wish to read through all of the information on the teacher's key, which begins on page 82.

3. When students have completed their work, go through the unit with them, checking answers and discussing the topics listed in the teacher's key.

4. If time permits, use one or more of the discussion topics or acitivities listed on the following page to conclude the unit.

OPTIONAL ACTIVITIES

1. Game: "What's My Line?" The purpose of this game is to show students that managers are found in many types of organizations. To do this, you will assume the role of manager in various organizations (one at a time) and students will try to find out what type of organization you manage.

   1. Divide the class into two teams.

   2. Each team is allowed to ask you ten questions in an attempt to discover what type of organization you manage. (Teams should alternate in asking questions.)

   3. If the organization you manage is correctly guessed on the first question, the team that makes the guess receives 20 points. With each additional question asked, the point value for a correct answer decreases by one point.

   4. If no team correctly guesses the type of organization after 20 questions, no points are given for the game. Give the class the answer and start the next game.

   5. Keep score (you may want to appoint a scorekeeper) and the team with the most points after five games is the winner.

   6. After the entire game is over, discuss with students the things that all managers have in common. (For example, all managers supervise others, make decisions, plan operation of the organization, etc.)

   Suggested organizations for which you may assume the role of manager:

   - Hotel or motel
   - Marina
   - Football Team
   - Bookstore
   - Motorcycle Shop
   - Automobile Dealer
   - Ski Resort
   - McDonald's Hamburger Drive-In
   - Pet Store
   - Bakery
   - Shoe Store
   - Grocery Store

2. Have students interview managers of small businesses in the community or invite one or more small business managers to class for a group interview. See the Interview Guide in the appendix for procedures on conducting a class interview.

GENERAL INFORMATION ON MANAGERS

All managers, from managers of very small businesses to the top managers of large corporations, have the common task of leading their organizations toward success, which generally is measured in terms of profits earned.

In a small retail organization, the manager is employed by the owner to operate the business at a profit. Because the business is small, the manager is a "jack of all trades," performing such varied activities as follows:

- .checking the financial papers of the business (bills, invoices, bank statements, etc.) for correctness
- .checking cash on hand at the beginning of each day and proving cash at the end of each day
- .preparing financial records and reports for the owner or owners of the business
- .making decisions regarding what type of merchandise to buy, what selling techniques to use, how many sales clerks to hire, and so forth.
- .handling human relations problems among employees and handling customer complaints
- .hiring, supervising, and discharging employees
- .planning and arranging for advertisement of the business and its products

The successful manager of a small business must have good human relations skills and must have some background and skill in handling financial operations. Furthermore, the manager must be able to make sound decisions and be able to communicate these decisions clearly to the other employees. Because they must perform or oversee so many activities of the organization, the small business manager must not only work hard but must also be able to motivate all other employees to work toward the best interest of the organization.

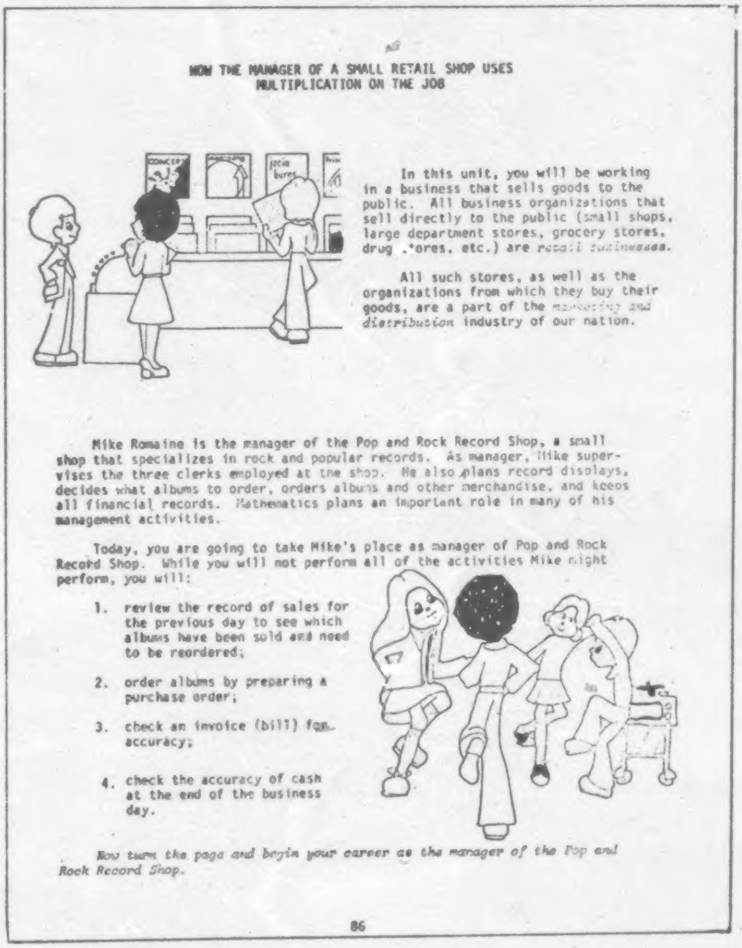
Unlike most top managers in large organizations, managers of small businesses often do not have college degrees. However, since they need the skills described above, small business managers profit from business courses in high school (such as business principles, accounting, business law, typewriting, etc.) and from such courses in vocational schools, junior colleges, or colleges.

Generally, managers of small businesses do not start out as managers. They begin by working in the business as a sales person or as an office worker. As they learn about the business and begin to demonstrate their knowledge of and interest in the total operation of the business, they may be promoted to assistant management or management positions or, they may find such positions in other organizations.

KEY - UNIT 4

HOW THE MANAGER OF A SMALL RETAIL SHOP USES MULTIPLICATION ON THE JOB

Introductory Page of Student Packet:



HOW THE MANAGER OF A SMALL RETAIL SHOP USES MULTIPLICATION ON THE JOB

In this unit, you will be working in a business that sells goods to the public. All business organizations that sell directly to the public (small shops, large department stores, grocery stores, drug stores, etc.) are *retail businesses*.

All such stores, as well as the organizations from which they buy their goods, are a part of the *marketing and distribution* industry of our nation.

Mike Romaine is the manager of the Pop and Rock Record Shop, a small shop that specializes in rock and popular records. As manager, Mike supervises the three clerks employed at the shop. He also plans record displays, decides what albums to order, orders albums and other merchandise, and keeps all financial records. Mathematics plans an important role in many of his management activities.

Today, you are going to take Mike's place as manager of Pop and Rock Record Shop. While you will not perform all of the activities Mike might perform, you will:

1. review the record of sales for the previous day to see which albums have been sold and need to be reordered;
2. order albums by preparing a purchase order;
3. check an invoice (bill) for accuracy;
4. check the accuracy of cash at the end of the business day.

Now turn the page and begin your career as the manager of the Pop and Rock Record Shop.

86

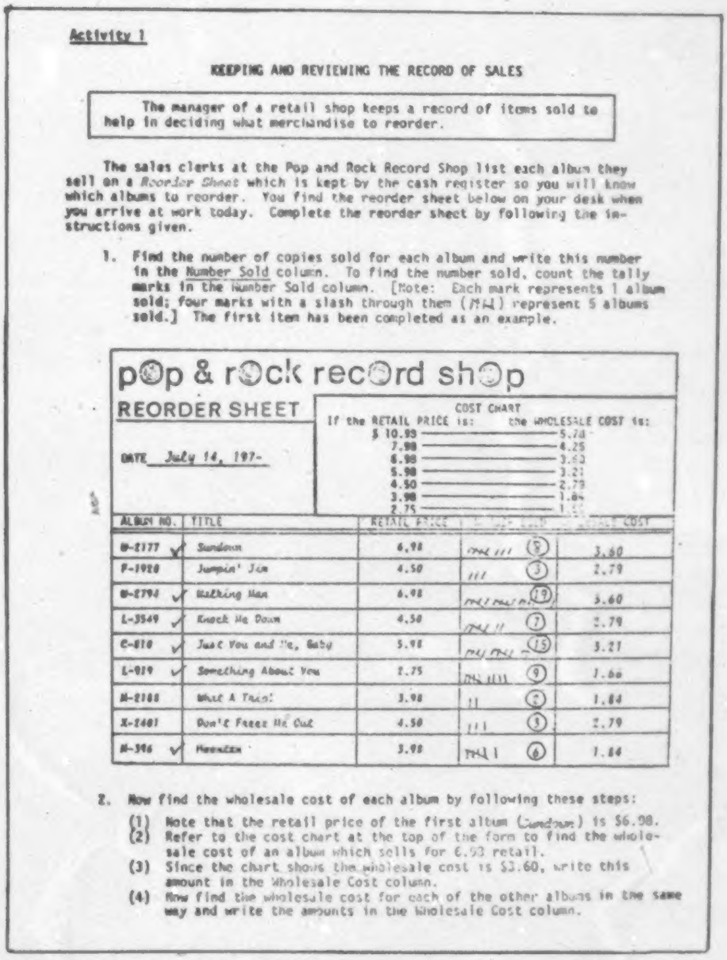
As you discuss the packet introductory page with students, supplement the discussion with information from page 79, "General Information About Small Business Managers."

If some of your students are acquainted with people who are managers, ask them to describe some of the tasks performed by these people and to tell in what type of organization the managers work.

KEY - UNIT 4

KEEPING AND REVIEWING THE RECORD OF SALES

Activity 1:



Activity 1

KEEPING AND REVIEWING THE RECORD OF SALES

> The manager of a retail shop keeps a record of items sold to help in deciding what merchandise to reorder.

The sales clerks at the Pop and Rock Record Shop list each album they sell on a *Reorder Sheet* which is kept by the cash register so you will know which albums to reorder. You find the reorder sheet below on your desk when you arrive at work today. Complete the reorder sheet by following the instructions given.

1. Find the number of copies sold for each album and write this number in the Number Sold column. To find the number sold, count the tally marks in the Number Sold column. [Note: Each mark represents 1 album sold; four marks with a slash through them (卌) represent 5 albums sold.] The first item has been completed as an example.

pop & rock record shop

REORDER SHEET

DATE *July 14, 197-*

COST CHART

If the RETAIL PRICE is:	the WHOLESALE COST is:
$ 10.95	5.78
7.98	4.25
6.98	3.60
5.98	3.21
4.50	2.79
3.98	1.84
2.75	1.66

ALBUM NO.	TITLE	RETAIL PRICE	NUMBER SOLD	WHOLESALE COST
W-2177 ✓	Sundown	6.98	卌 /// ⑧	3.60
P-1920	Jumpin' Jim	4.50	/// ③	2.79
W-2794 ✓	Walking Man	6.98	卌 卌 卌 //// ⑲	3.60
L-3549 ✓	Knock Me Down	4.50	卌 // ⑦	2.79
C-810 ✓	Just You and Me, Baby	5.98	卌 卌 卌 ⑮	3.21
L-919 ✓	Something About You	2.75	卌 //// ⑨	1.66
M-2188	What A Train!	3.98	// ②	1.84
X-2401	Don't Freeze Me Out	4.50	/// ③	2.79
M-396 ✓	[illegible]	3.98	卌 / ⑥	1.84

2. Now find the wholesale cost of each album by following these steps:
   (1) Note that the retail price of the first album (*Sundown*) is $6.98.
   (2) Refer to the cost chart at the top of the form to find the wholesale cost of an album which sells for 6.98 retail.
   (3) Since the chart shows the wholesale cost is $3.60, write this amount in the Wholesale Cost column.
   (4) Now find the wholesale cost for each of the other albums in the same way and write the amounts in the Wholesale Cost column.

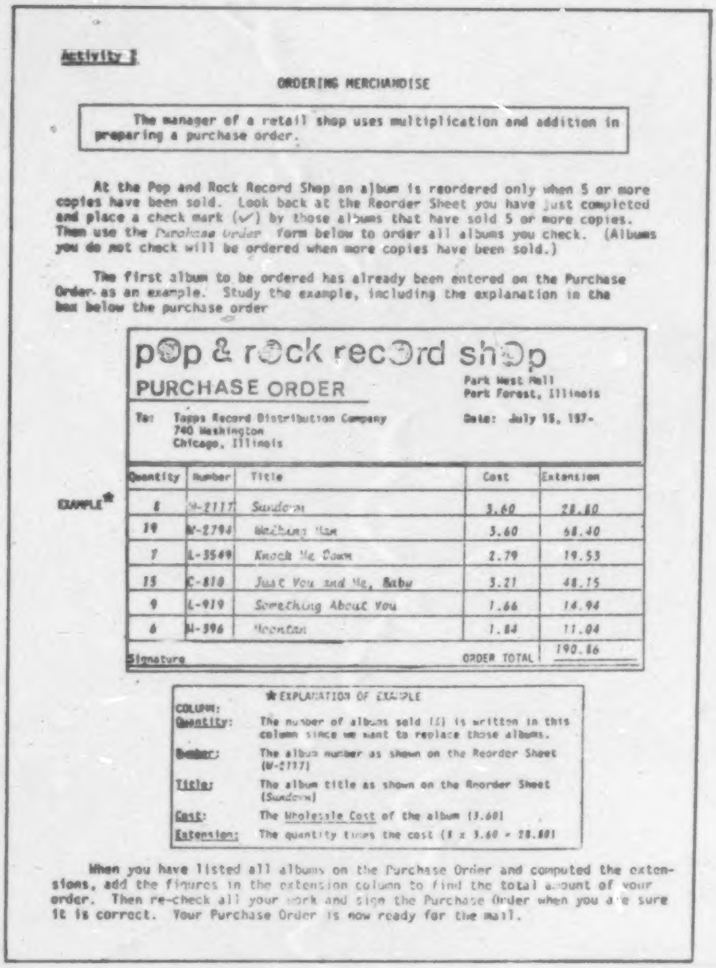
This activity introduces students to the use of tally marks and gives them practice converting tally marks to Arabic numerals. It also gives students experience in reading charts. Although Activity 1 does not provide practice in multiplication, it is used as a source document for Activity 2 in which multiplication is used to make extensions on a purchase order.

If students make errors on Activity 1, those errors will be reflected in their answers in Activity 2. Therefore, you may want to go over the answers to this activity with the class as soon as most of the students have finished the activity and before they go to the next activity.

KEY - UNIT 4

ORDERING MERCHANDISE

Activity 2:



Activity 2

ORDERING MERCHANDISE

The manager of a retail shop uses multiplication and addition in preparing a purchase order.

At the Pop and Rock Record Shop an album is reordered only when 5 or more copies have been sold. Look back at the Reorder Sheet you have just completed and place a check mark (✓) by those albums that have sold 5 or more copies. Then use the *Purchase Order* form below to order all albums you check. (Albums you do not check will be ordered when more copies have been sold.)

The first album to be ordered has already been entered on the Purchase Order as an example. Study the example, including the explanation in the box below the purchase order

pop & rock record shop
PURCHASE ORDER

Park West Mall
Park Forest, Illinois

To: Topps Record Distribution Company
740 Washington
Chicago, Illinois

Date: July 15, 197-

	Quantity	Number	Title	Cost	Extension
EXAMPLE*	8	W-2117	*Sundown*	3.60	28.80
	19	W-2794	*Walking Man*	3.60	68.40
	7	L-3549	*Knock Me Down*	2.79	19.53
	15	C-818	*Just You and Me, Baby*	3.21	48.15
	9	L-919	*Something About You*	1.66	14.94
	6	W-396	*Moontan*	1.84	11.04
	Signature			ORDER TOTAL	190.86

*EXPLANATION OF EXAMPLE

COLUMN:	
Quantity:	The number of albums sold (8) is written in this column since we want to replace those albums.
Number:	The album number as shown on the Reorder Sheet (W-2117)
Title:	The album title as shown on the Reorder Sheet (*Sundown*)
Cost:	The Wholesale Cost of the album (3.60)
Extension:	The quantity times the cost (8 x 3.60 = 28.80)

When you have listed all albums on the Purchase Order and computed the extensions, add the figures in the extension column to find the total amount of your order. Then re-check all your work and sign the Purchase Order when you are sure it is correct. Your Purchase Order is now ready for the mail.

To complete this activity, students must refer to Activity 1. Students are instructed to:

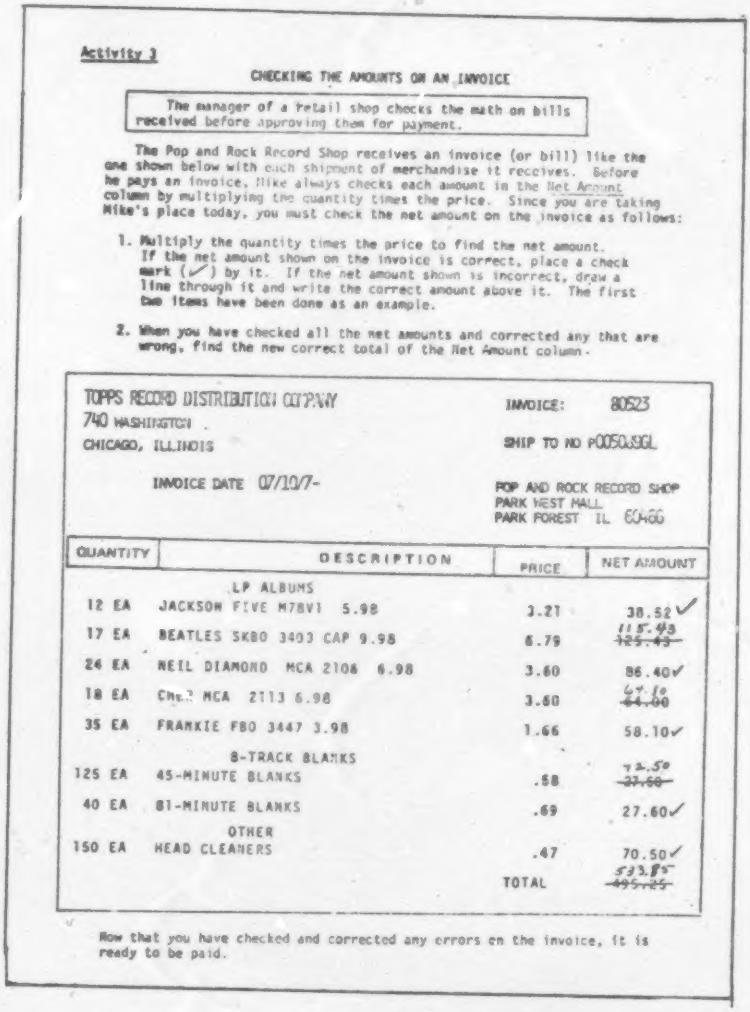
1. Go to the Reorder Sheet (Activity 1) and place a check mark (✓) by those albums of which five or more copies have been sold;
2. Transfer the name, album number, quantity, and cost of each album selling five or more copies to the purcahse order; and
3. Compute the extensions for each album by multiplying the quantity times the cost figure.
4. Total the extension column.

Discuss with students the need to keep adequate merchandise on hand. Point out that if the record shop did not reorder popular records as the albums are sold, the store would run out and customers would go elsewhere to buy. Thus, reordering merchandise promptly is a crucial part of the manager's job in a small retail shop.

KEY - UNIT 4

CHECKING THE AMOUNTS ON AN INVOICE

Activity 3:



Activity 3

CHECKING THE AMOUNTS ON AN INVOICE

The manager of a retail shop checks the math on bills received before approving them for payment.

The Pop and Rock Record Shop receives an invoice (or bill) like the one shown below with each shipment of merchandise it receives. Before he pays an invoice, Mike always checks each amount in the Net Amount column by multiplying the quantity times the price. Since you are taking Mike's place today, you must check the net amount on the invoice as follows:

1. Multiply the quantity times the price to find the net amount. If the net amount shown on the invoice is correct, place a check mark (✓) by it. If the net amount shown is incorrect, draw a line through it and write the correct amount above it. The first two items have been done as an example.
2. When you have checked all the net amounts and corrected any that are wrong, find the new correct total of the Net Amount column.

TOPPS RECORD DISTRIBUTION COMPANY
740 WASHINGTON
CHICAGO, ILLINOIS

INVOICE: 80523

SHIP TO NO P0050J9GL

INVOICE DATE 07/10/7-

POP AND ROCK RECORD SHOP
PARK WEST MALL
PARK FOREST IL 60466

QUANTITY	DESCRIPTION	PRICE	NET AMOUNT
	LP ALBUMS		
12 EA	JACKSON FIVE M78V1 5.98	3.21	38.52 ✓
17 EA	BEATLES SKBO 3403 CAP 9.98	6.79	115.43 ~~125.43~~
24 EA	NEIL DIAMOND MCA 2106 6.98	3.60	86.40 ✓
18 EA	CHER MCA 2113 6.98	3.60	64.80 ~~64.00~~
35 EA	FRANKIE FBO 3447 3.98	1.66	58.10 ✓
	8-TRACK BLANKS		
125 EA	45-MINUTE BLANKS	.58	72.50 ~~37.50~~
40 EA	81-MINUTE BLANKS	.69	27.60 ✓
	OTHER		
150 EA	HEAD CLEANERS	.47	70.50 ✓
		TOTAL	533.85 ~~495.25~~

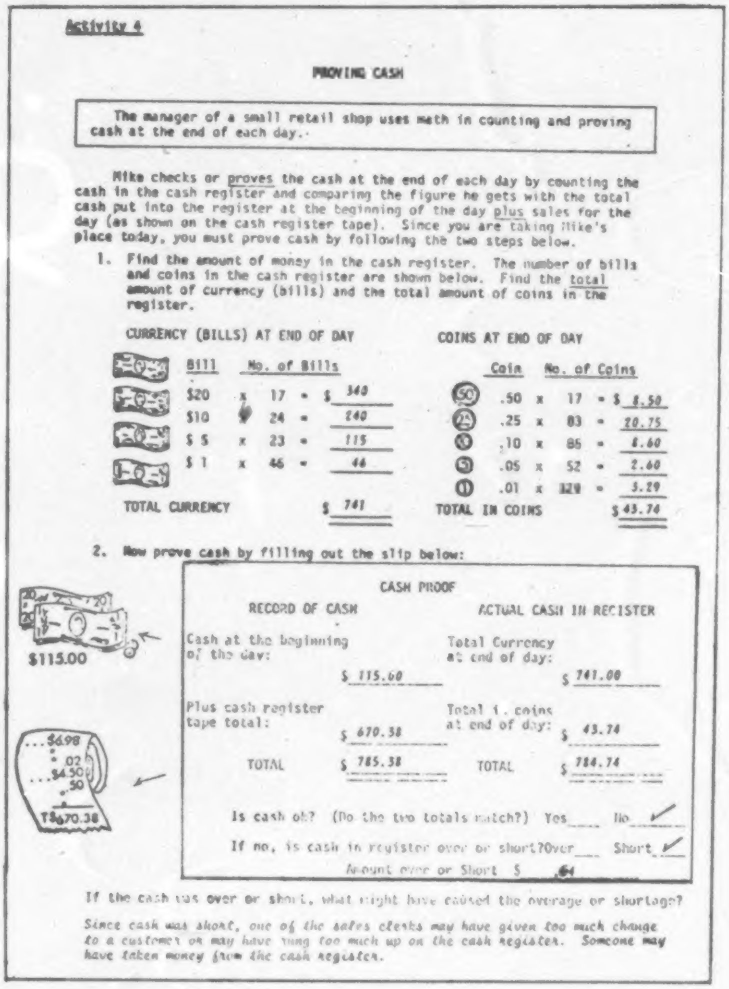
Now that you have checked and corrected any errors on the invoice, it is ready to be paid.

This activity simply requires students to check the extensions on the invoice shown above by multiplying the quantity times the price.

Check to see that students placed a check mark by each correct extension and changed incorrect extensions as shown in the illustration above.

PROVING CASH

Activity 4:



Activity 4

PROVING CASH

The manager of a small retail shop uses math in counting and proving cash at the end of each day.

Mike checks or proves the cash at the end of each day by counting the cash in the cash register and comparing the figure he gets with the total cash put into the register at the beginning of the day plus sales for the day (as shown on the cash register tape). Since you are taking Mike's place today, you must prove cash by following the two steps below.

1. Find the amount of money in the cash register. The number of bills and coins in the cash register are shown below. Find the total amount of currency (bills) and the total amount of coins in the register.

CURRENCY (BILLS) AT END OF DAY

Bill		No. of Bills		
$20	x	17	=	$ 340
$10	x	24	=	240
$ 5	x	23	=	115
$ 1	x	46	=	46
TOTAL CURRENCY				$ 741

COINS AT END OF DAY

Coin		No. of Coins		
.50	x	17	=	$ 8.50
.25	x	83	=	20.75
.10	x	86	=	8.60
.05	x	52	=	2.60
.01	x	329	=	3.29
TOTAL IN COINS				$ 43.74

2. Now prove cash by filling out the slip below:

CASH PROOF

RECORD OF CASH		ACTUAL CASH IN REGISTER	
Cash at the beginning of the day:	$ 115.00	Total Currency at end of day:	$ 741.00
Plus cash register tape total:	$ 670.38	Total i. coins at end of day:	$ 43.74
TOTAL	$ 785.38	TOTAL	$ 784.74

Is cash ok? (Do the two totals match?) Yes___ No ✓

If no, is cash in register over or short? Over___ Short ✓

Amount over or Short $ .84

If the cash was over or short, what might have caused the overage or shortage?

Since cash was short, one of the sales clerks may have given too much change to a customer or may have rung too much up on the cash register. Someone may have taken money from the cash register.

The illustration above shows the answers for Activity 4. In checking Step 1, first check to see whether students have the correct totals for "Currency at End of Day" and "Coins at End of Day". If students' totals for this step are not correct, have them recheck their multiplication and re-total.

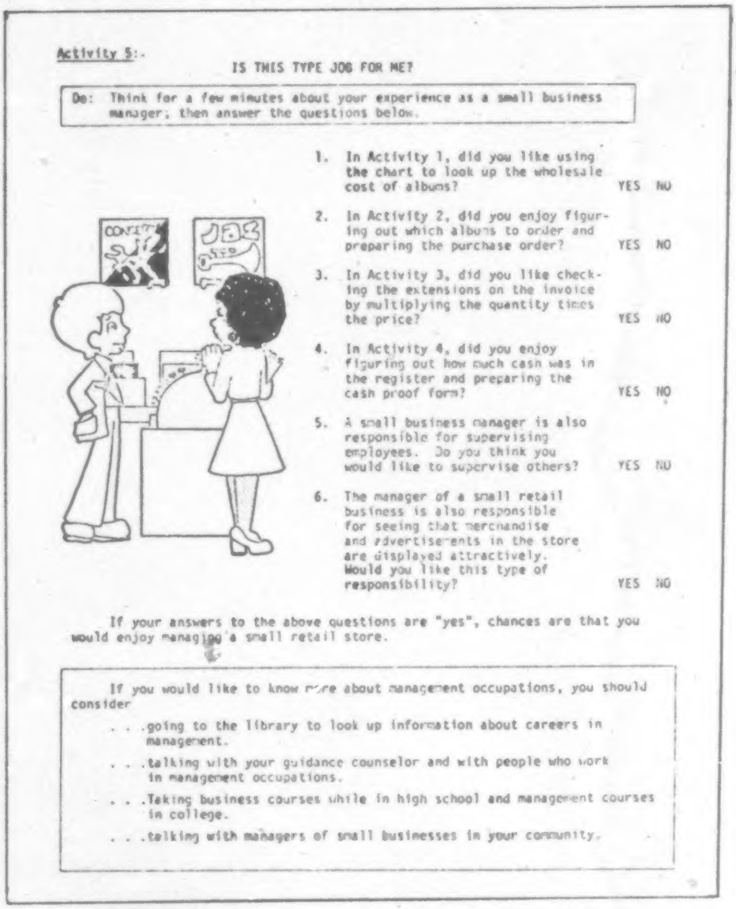
In checking Step 2 (cash proof) have students explain why the cash at the beginning of the day plus the cash register tape total should equal the total in the cash register at the end of the day.

Since the cash was 84¢ short, discuss with students the reasons why the shortage might have occurred.

KEY - UNIT 4

IS THIS TYPE JOB FOR ME?

Activity 5:



Activity 5:.

IS THIS TYPE JOB FOR ME?

Do: Think for a few minutes about your experience as a small business manager; then answer the questions below.

1. In Activity 1, did you like using the chart to look up the wholesale cost of albums? YES NO
2. In Activity 2, did you enjoy figuring out which albums to order and preparing the purchase order? YES NO
3. In Activity 3, did you like checking the extensions on the invoice by multiplying the quantity times the price? YES NO
4. In Activity 4, did you enjoy figuring out how much cash was in the register and preparing the cash proof form? YES NO
5. A small business manager is also responsible for supervising employees. Do you think you would like to supervise others? YES NO
6. The manager of a small retail business is also responsible for seeing that merchandise and advertisements in the store are displayed attractively. Would you like this type of responsibility? YES NO

If your answers to the above questions are "yes", chances are that you would enjoy managing a small retail store.

If you would like to know more about management occupations, you should consider

. . .going to the library to look up information about careers in management.

. . .talking with your guidance counselor and with people who work in management occupations.

. . .Taking business courses while in high school and management courses in college.

. . .talking with managers of small businesses in your community.

Individual student responses to the questions on this sheet will vary; however, after such a breif exposure, it should not be expected that all will have an interest in the field of small business management.

Call attention to the activities listed in the second "box" on this sheet and encourage interested students to seek more information by going to the sources mentioned.

HOW THE MANAGER OF A SMALL RETAIL SHOP USES MULTIPLICATION ON THE JOB

CONCERT
moonsong
jacie burns
fris

In this unit, you will be working in a business that sells goods to the public. All business organizations that sell directly to the public (small shops, large department stores, grocery stores, drug stores, etc.) are *retail businesses.*

All such stores, as well as the organizations from which they buy their goods, are a part of the *marketing and distribution* industry of our nation.

Mike Romaine is the manager of the Pop and Rock Record Shop, a small shop that specializes in rock and popular records. As manager, Mike supervises the three clerks employed at the shop. He also plans record displays, decides what albums to order, orders albums and other merchandise, and keeps all financial records. Mathematics plays an important role in many of his management activities.

Today, you are going to take Mike's place as manager of Pop and Rock Record Shop. While you will not perform all of the activities Mike might perform, you will:

1. review the record of sales for the previous day to see which albums have been sold and need to be reordered;
2. order albums by preparing a purchase order;
3. check an invoice (bill) for accuracy;
4. check the accuracy of cash at the end of the business day.

Now turn the page and begin your career as the manager of the Pop and Rock Record Shop.

Activity 1:

KEEPING AND REVIEWING THE RECORD OF SALES

> The manager of a retail shop keeps a record of items sold to help in deciding what merchandise to reorder.

The sales clerks at the Pop and Rock Record Shop list each album they sell on a *Reorder Sheet* which is kept by the cash register so you will know which albums to reorder. You find the reorder sheet below on your desk when you arrive at work today. Complete the reorder sheet by following the instructions given below.

1. Find the number of copies sold for each album and write this number in the Number Sold column. To find the number sold, count the tally marks in the Number Sold column. [Note: Each mark represents 1 album sold; four marks with a slash through them (卌) represent 5 albums sold.] The first item has been completed as an example.

pop & rock record shop

REORDER SHEET

DATE *July 14, 197-*

COST CHART

If the RETAIL PRICE is:	the WHOLESALE COST is:
$ 10.98	5.78
7.98	4.25
6.98	3.60
5.98	3.21
4.50	2.79
3.98	1.84
2.75	1.66

ALBUM NO.	TITLE	RETAIL PRICE	NUMBER SOLD	WHOLESALE COST
W-2177	*Sundown*	6.98	卌 ||| ⑧	
F-1920	*Jumpin' Jim*	4.50	|||	
W-2794	*Walking Man*	6.98	卌 卌 卌 ||||	
L-3549	*Knock Me Down*	4.50	卌 ||	
C-810	*Just You and Me, Baby*	5.98	卌 卌 卌	
L-919	*Something About You*	2.75	卌 ||||	
M-2188	*What A Trip!*	3.98	||	
X-2401	*Don't Freez Me Out*	4.50	|||	
M-396	*Moontan*	3.98	卌		

2. Now find the wholesale cost of each album by following these steps:
   (1) Note that the retail price of the first album (*Sundown*) is $6.98.
   (2) Refer to the cost chart at the top of the form to find the wholesale cost of an album which sells for 6.98 retail.
   (3) Since the chart shows the wholesale cost is $3.60, write this amount in the Wholesale Cost column.
   (4) Now find the wholesale cost for each of the other albums in the same way and write the amounts in the Wholesale Cost column.

Activity 2:

ORDERING MERCHANDISE

> The manager of a retail shop uses multiplication and addition in preparing a purchase order.

At the Pop and Rock Record Shop an album is reordered only when 5 or more copies have been sold. Look back at the Reorder Sheet you have just completed and place a check mark (✓) by those albums that have sold 5 or more copies. Then use the *Purchase Order* form below to order all albums you check. (Albums you do not check will be ordered when more copies have been sold.)

The first album to be ordered has already been entered on the Purchase Order as an example. Study the example, including the explanation in the box below the purchase order

pop & rock record shop

PURCHASE ORDER

Park West Mall
Park Forest, Illinois

To: Topps Record Distribution Company
740 Washington
Chicago, Illinois

Date: July 15, 197-

EXAMPLE*

Quantity	Number	Title	Cost	Extension
8	*W-2117*	*Sundown*	*3.60*	*28.80*

Signature

ORDER TOTAL ____________

*EXPLANATION OF EXAMPLE

COLUMN:	
Quantity:	The number of albums sold (*8*) is written in this column since we want to replace those albums.
Number:	The album number as shown on the Reorder Sheet (*W-2117*)
Title:	The album title as shown on the Reorder Sheet (*Sundown*)
Cost:	The Wholesale Cost of the album (*3.60*)
Extension:	The quantity times the cost (*8* x *3.60* = *28.80*)

When you have listed all albums on the Purchase Order and computed the extensions, add the figures in the extension column to find the total amount of your order. Then re-check all your work and sign the Purchase Order when you are sure it is correct. Your Purchase Order is now ready for the mail.

Activity 3:

CHECKING THE AMOUNTS ON AN INVOICE

> The manager of a retail shop checks the math on bills received before approving them for payment.

The Pop and Rock Record Shop receives an invoice (or bill) like the one shown below with each shipment of merchandise it receives. Before he pays an invoice, Mike always checks each amount in the Net Amount column by multiplying the quantity times the price. Since you are taking Mike's place today, you must check the net amount on the invoice as follows:

1. Multiply the quantity times the price to find the net amount. If the net amount shown on the invoice is correct, place a check mark (✓) by it. If the net amount shown is incorrect, draw a line through it and write the correct amount above it. The first two items have been done as an example.
2. When you have checked all the net amounts and corrected any that are wrong, find the new correct total of the Net Amount column.

TOPPS RECORD DISTRIBUTION COMPANY
740 WASHINGTON
CHICAGO, ILLINOIS

INVOICE: 80523

SHIP TO NO P005089GL

INVOICE DATE 07/10/7-

POP AND ROCK RECORD SHOP
PARK WEST MALL
PARK FOREST IL 60466

QUANTITY	DESCRIPTION	PRICE	NET AMOUNT
	LP ALBUMS		
12 EA	JACKSON FIVE M78V1 5.98	3.21	38.52 ✓
17 EA	BEATLES SKBO 3403 CAP 9.98	6.79	115.43 ~~125.43~~
24 EA	NEIL DIAMOND MCA 2106 6.98	3.60	86.40
18 EA	CHER MCA 2113 6.98	3.60	64.00
35 EA	FRANKIE FBO 3447 3.98	1.66	58.10
	8-TRACK BLANKS		
125 EA	45-MINUTE BLANKS	.58	27.50
40 EA	81-MINUTE BLANKS	.69	27.60
	OTHER		
150 EA	HEAD CLEANERS	.47	70.50
		TOTAL	495.25

Now that you have checked and corrected any errors on the invoice, it is ready to be paid.

Activity 4:

PROVING CASH

The manager of a small retail shop uses math in counting and proving cash at the end of each day.

Mike checks or proves the cash at the end of each day by counting the cash in the cash register and comparing the figure he gets with the total cash put into the register at the beginning of the day plus sales for the day (as shown on the cash register tape). Since you are taking Mike's place today, you must prove cash by following the two steps below.

Step 1: Find the amount of money in the cash register. The number of bills and coins in the cash register are shown below. Find the total amount of currency (bills) and the total amount of coins in the register.

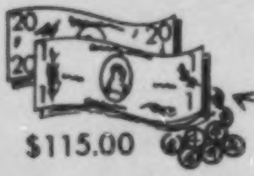
CURRENCY (BILLS) AT END OF DAY

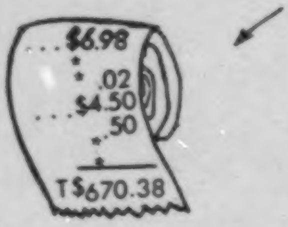
Bill		No. of Bills		
$20	x	17	=	$_______
$10	x	24	=	_______
$ 5	x	23	=	_______
$ 1	x	46	=	_______
TOTAL CURRENCY				$_______

COINS AT END OF DAY

	Coin		No. of Coins		
㊿	.50	x	17	=	$_____
㉕	.25	x	83	=	_____
⑩	.10	x	86	=	_____
⑤	.05	x	52	=	_____
①	.01	x	329	=	_____
TOTAL IN COINS					$_____

Step 2: Now prove cash by filling out the slip below:





CASH PROOF

RECORD OF CASH		ACTUAL CASH IN REGISTER	
Cash at the beginning of the day:	$___________	Total Currency at end of day:	$___________
Plus cash register tape total:	$___________	Total in coins at end of day:	$___________
TOTAL	$___________	TOTAL	$___________

Is cash ok? (Do the two totals match?) Yes____ No_______

If no, is cash in register over or short? Over___ Short____

Amount over or Short $_____________

If the cash was over or short, what might have caused the overage or shortage?

Activity 5:

IS THIS TYPE JOB FOR ME?

Do: Think for a few minutes about your experience as a small business manager; then answer the questions below.

CONCERTO
JAZ

1. In Activity 1, did you like using the chart to look up the wholesale cost of albums? YES NO
2. In Activity 2, did you enjoy figuring out which albums to order and preparing the purchase order? YES NO
3. In Activity 3, did you like checking the extensions on the invoice by multiplying the quantity times the price? YES NO
4. In Activity 4, did you enjoy figuring out how much cash was in the register and preparing the cash proof form? YES NO
5. A small business manager is also responsible for supervising employees. Do you think you would like to supervise others? YES NO
6. The manager of a small retail business is also responsible for seeing that merchandise and advertisements in the store are displayed attractively. Would you like this type of responsibility? YES NO

If your answers to the above questions are "yes", chances are that you would enjoy managing a small retail store.

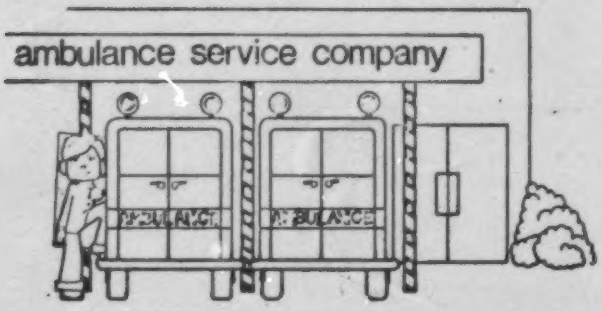
If you would like to know more about management occupations, you should consider

. . .going to the library to look up information about careers in management.

. . .talking with your guidance counselor and with people who work in management occupations.

. . .Taking business courses while in high school and management courses in college.

. . .talking with managers of small businesses in your community.



UNIT 5

HOW A PROPERTY ACCOUNTANT IN A MEDICAL SERVICE INDUSTRY USES DIVISION ON THE JOB

PURPOSE:

This unit teaches the student about property accounting with particular attention to depreciation.

The medical service industry includes all kinds of health occupations and services such as physicians, surgeons, nurses, pharmaceutical companies, ambulance companies, hospitals, nursing homes, drug stores, and so on.

MAJOR ACTIVITIES:

This unit contains seven activities, including the math activities of dividing amounts by numbers of months. In performing the seven activities, students will

1. learn about depreciation,
2. fill in Fixed Asset Records,
3. compute the Estimated Life of ambulances in Months,
4. compute the Amount to be Depreciated,
5. compute the Amount of Monthly Depreciation,
6. complete the Fixed Asset Records, and
7. prepare the Monthly Depreciation Expense Sheet.

Before class begins:

1. Duplicate and assemble enough copies of the student simulation packet to provide each student with a set.

2. Read the "General Information About Property Accounting Profession in a Medical Service Industry," page 94.

During class:

1. Distribute the simulation packets and discuss the introductory page and Activity 1. It may be desirable to work through Activity 1 with students by reading the questions aloud, having answers given, and then requiring students to fill in the blanks. Be sure students can pronounce and spell the words *depreciation* and *obsolescense*.

2. Assign the remaining six activities. Students with a good reading and math background will be able to complete the activities on their own. Less able students should be "walked" by the teacher through the units.

3. Check all the work with the students. Allow sufficient time to discuss Activity 8, "Is This Job for Me?"

OPTIONAL ACTIVITY

Classroom Project--The purpose of this project is to estimate the value of articles that have been subject to "wear and tear" and obsolescence and to compute the amount of depreciation and the monthly depreciation. Use the following procedures:

1. Have the students bring a "For Sale" description of something they own to class, such as a transister radio, bicycle, motor bike, skates, skimobile, football, etc. You may want to provide students with blank forms similar to the one shown below:

FOR SALE

Name of article ______________________________

Month and year purchased ________________________

Original cost $______________

Description of present condition (condition of paint? chipped? working condition? any parts broken? appearance? needed repairs? etc.):

____

____

____

What I am asking for it $____________

Name of seller ______________________

Acceptor's name ________________________

Counterofferor's name ____________________ Amount $________

Counterofferor's name ____________________ Amount $________

2. At the beginning of class, have students post their "For Sale" ads on the chalkboard, using pieces of masking tape.

3. Have the students then read the ads of the other students to accept or make counteroffers by signing up for items they "want to buy." Offers to buy each item may be made by as many as three students.

4. Have students take their seats after a reasonable time.

5. Appoint a student to read an ad that has been accepted or for which a counteroffer has been made.

6. Now, compute the depreciation on the article. Example: "Transistor radio, cost $19.95 twelve months ago. Good condition but will need new batteries soon. Offered for $8. No one accepts, but there are two counteroffers for $5 and $4 respectively. The average of the counteroffers is $4.50. The amount of depreciation is $19.95 minus $4.50 equals $15.45. The estimated depreciation over a year is thus $15.45. The monthly depreciation is $15.45 divided by 12 months, which is $1.29 a month.

GENERAL INFORMATION ABOUT THE PROPERTY ACCOUNTING PROFESSION IN A MEDICAL SERVICE INDUSTRY

The property accountant keeps track of the value of all the property owned by a business or industry, such as land, buildings, vehicles, machinery, and equipment. Many times the value of this property runs into millions of dollars, especially if it concerns a manufacturing plant.

An example of property accounting is the depreciation of ambulances in the medical service industry. The ambulance service business not only requires dispatching ambulances, driving them, and maintaining them, but also providing special medical and first-aid services. The people transported by ambulances are either sick, injured, or convalescent. Often they need first aid, protection from jolts and bad weather conditions, oxygen, and life support treatment. Thus, an ambulance is often a heavy, expensive vehicle fully equipped for all kinds of emergencies. Normally they are used around the clock and thus may be greatly depreciated in two or three years. Their trade in, resale, or scrap value at the end of two years may be only a fraction of the original costs.

The property accountant thus must take into account the original cost, the useful life, and the probable trade-in, resale, or scrap value.

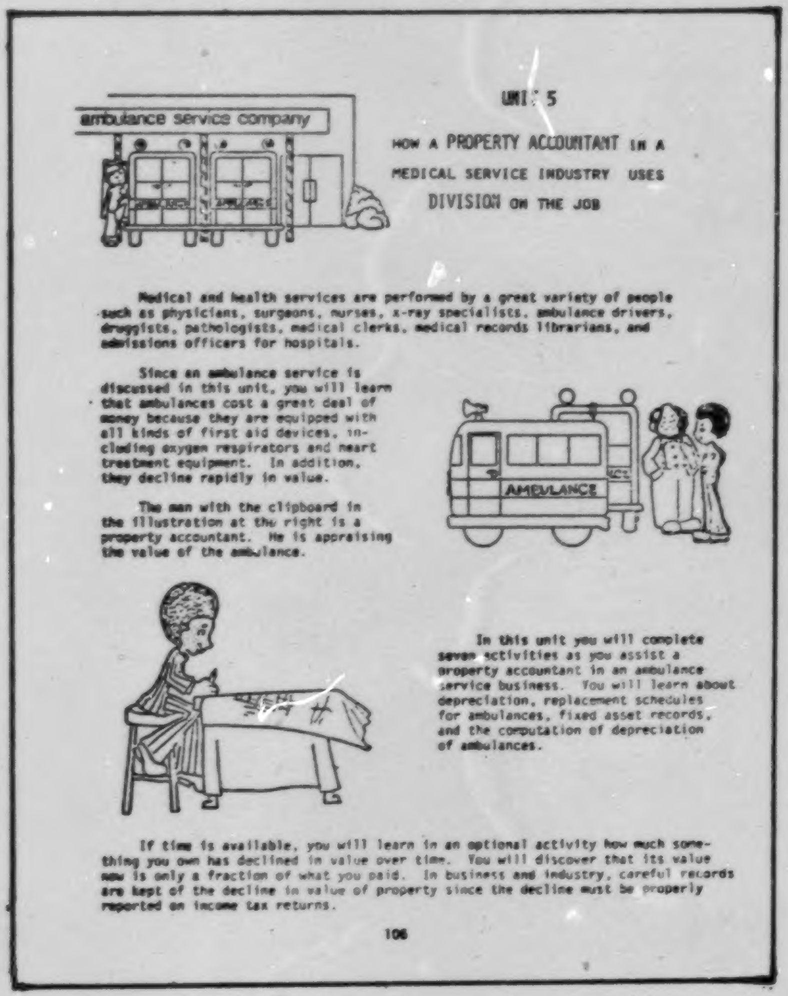
With this information, the property accountant can accurately compute the value of all the property owned and how much of the value has depreciated because of wear and tear and obsolescence. This information is very important at income tax time. Often the work of the property accountant is extensively reviewed by federal income tax agents and thus is subject to a great deal of attention.

Because property accountants are responsible for valuing property which affects ownership, income, and taxes, they require a great deal of education and are in great demand in business, industry, and government. With experience they receive excellent salaries. Some complete the requirements to become Certified Public Accountants.

KEY - UNIT 5

HOW A PROPERTY ACCOUNTANT IN A MEDICAL SERVICE INDUSTRY USES DIVISION ON THE JOB

Introductory Page of Student Packet:



UNIT 5

HOW A PROPERTY ACCOUNTANT IN A MEDICAL SERVICE INDUSTRY USES DIVISION ON THE JOB

Medical and health services are performed by a great variety of people such as physicians, surgeons, nurses, x-ray specialists, ambulance drivers, druggists, pathologists, medical clerks, medical records librarians, and admissions officers for hospitals.

Since an ambulance service is discussed in this unit, you will learn that ambulances cost a great deal of money because they are equipped with all kinds of first aid devices, including oxygen respirators and heart treatment equipment. In addition, they decline rapidly in value.

The man with the clipboard in the illustration at the right is a property accountant. He is appraising the value of the ambulance.

In this unit you will complete seven activities as you assist a property accountant in an ambulance service business. You will learn about depreciation, replacement schedules for ambulances, fixed asset records, and the computation of depreciation of ambulances.

If time is available, you will learn in an optional activity how much something you own has declined in value over time. You will discover that its value now is only a fraction of what you paid. In business and industry, careful records are kept of the decline in value of property since the decline must be properly reported on income tax returns.

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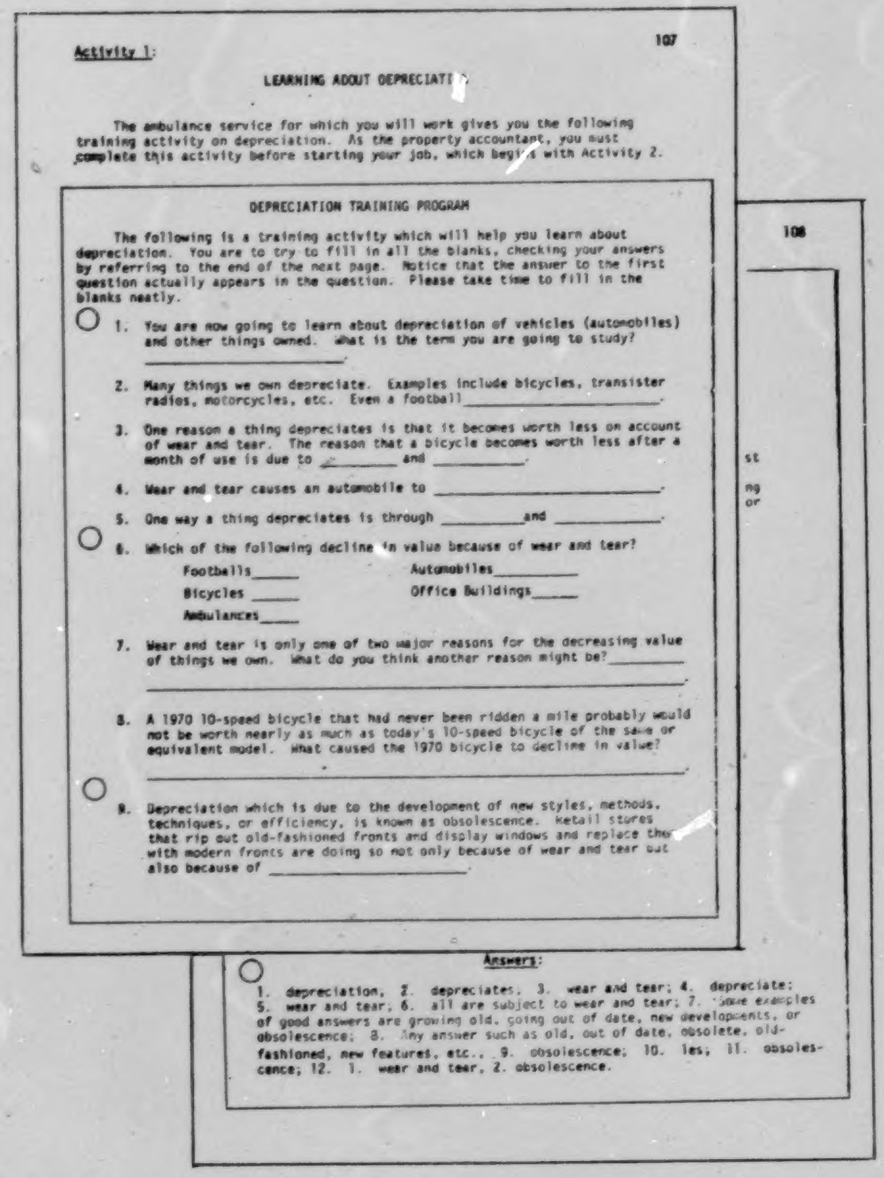
As you discuss the packet introductory page with students, supplement the discussion with information from page 94, "General Information About the Property Accounting Profession in a Medical Service Industry."

KEY - UNIT 5

LEARNING ABOUT DEPRECIATION

Activity 1:



Activity 1: 107

LEARNING ABOUT DEPRECIATION

The ambulance service for which you will work gives you the following training activity on depreciation. As the property accountant, you must complete this activity before starting your job, which begins with Activity 2.

DEPRECIATION TRAINING PROGRAM

The following is a training activity which will help you learn about depreciation. You are to try to fill in all the blanks, checking your answers by referring to the end of the next page. Notice that the answer to the first question actually appears in the question. Please take time to fill in the blanks neatly.

1. You are now going to learn about depreciation of vehicles (automobiles) and other things owned. What is the term you are going to study? ________________.
2. Many things we own depreciate. Examples include bicycles, transister radios, motorcycles, etc. Even a football ________________.
3. One reason a thing depreciates is that it becomes worth less on account of wear and tear. The reason that a bicycle becomes worth less after a month of use is due to ________ and ________.
4. Wear and tear causes an automobile to ________________.
5. One way a thing depreciates is through ________ and ________.
6. Which of the following decline in value because of wear and tear?
   Footballs_____ Automobiles_________
   Bicycles _____ Office Buildings_____
   Ambulances_____
7. Wear and tear is only one of two major reasons for the decreasing value of things we own. What do you think another reason might be? ________________.
8. A 1970 10-speed bicycle that had never been ridden a mile probably would not be worth nearly as much as today's 10-speed bicycle of the same or equivalent model. What caused the 1970 bicycle to decline in value? ________________.
9. Depreciation which is due to the development of new styles, methods, techniques, or efficiency, is known as obsolescence. Retail stores that rip out old-fashioned fronts and display windows and replace them with modern fronts are doing so not only because of wear and tear but also because of ________________.

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Answers:

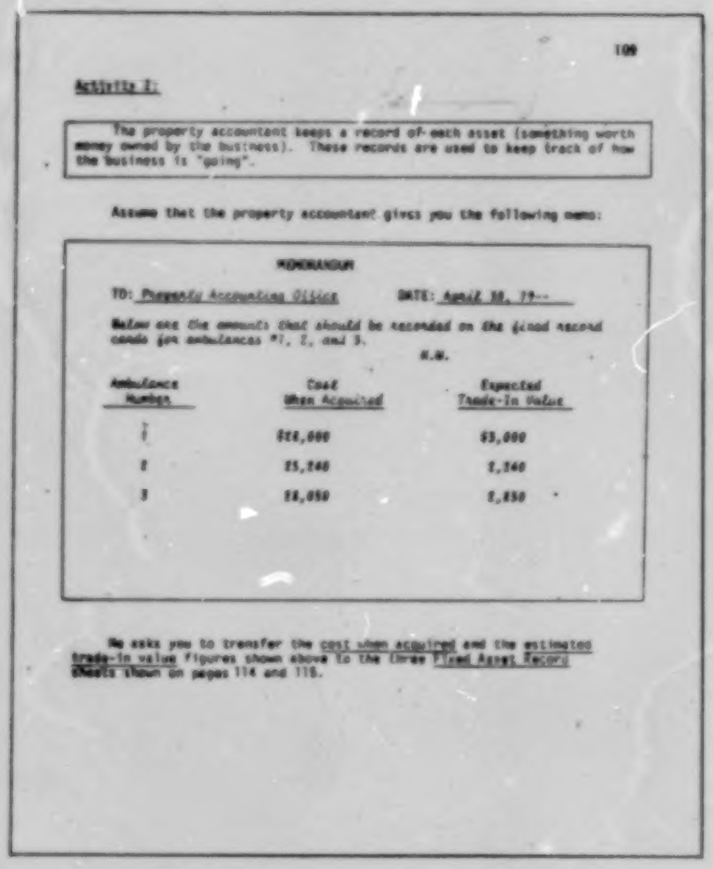
1. depreciation, 2. depreciates, 3. wear and tear; 4. depreciate; 5. wear and tear; 6. all are subject to wear and tear; 7. Some examples of good answers are growing old, going out of date, new developments, or obsolescence; 8. Any answer such as old, out of date, obsolete, old-fashioned, new features, etc., 9. obsolescence; 10. Yes; 11. obsolescence; 12. 1. wear and tear, 2. obsolescence.

The purpose of this activity is to learn some of the terminology of depreciation through self-learning items so that students can experience some of the work of the property accountant.

The terms stressed in Activity 1 are depreciation, wear and tear, and obsolescence. The vocabulary terms are required to be written in a sufficient number of times to make the student comfortable with them.

Answers appear on the second page of the activity.

Activity 2:



Activity 2:

The property accountant keeps a record of each asset (something worth money owned by the business). These records are used to keep track of how the business is "going".

Assume that the property accountant gives you the following memo:

MEMORANDUM

TO: Property Accounting Office DATE: April 30, 19--

Below are the amounts that should be recorded on the fixed record cards for ambulances #1, 2, and 3.

R.W.

Ambulance Number	Cost When Acquired	Expected Trade-In Value
1	$24,000	$3,000
2	25,240	2,240
3	28,050	2,850

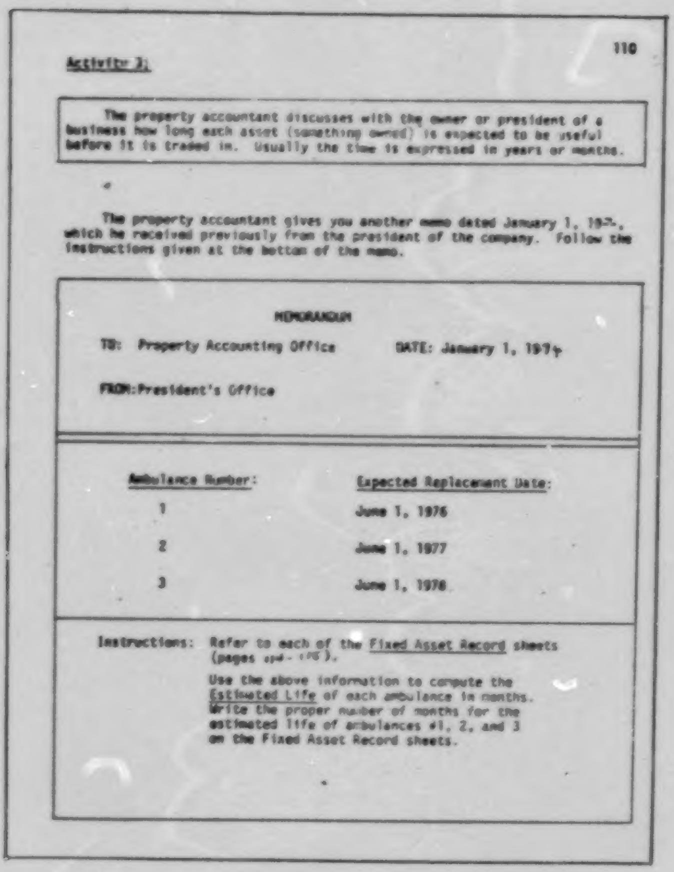
He asks you to transfer the cost when acquired and the estimated trade-in value figures shown above to the three Fixed Asset Record Sheets shown on pages 114 and 115.

The purpose of Activity 2 is to have the students follow the instructions to fill in information on Fixed Asset Records. A fixed asset is a term used to describe equipment the ambulance service owns that is expected to be kept for more than 1 year.

Refer to key pages 102 and 103 to check students' entries on the Fixed Asset Record sheets.

KEY - UNIT 5

Activity 3:



Activity 3:

The property accountant discusses with the owner or president of a business how long each asset (something owned) is expected to be useful before it is traded in. Usually the time is expressed in years or months.

The property accountant gives you another memo dated January 1, 197[illegible], which he received previously from the president of the company. Follow the instructions given at the bottom of the memo.

MEMORANDUM

TO: Property Accounting Office DATE: January 1, 197[illegible]

FROM: President's Office

Ambulance Number:	Expected Replacement Date:
1	June 1, 1976
2	June 1, 1977
3	June 1, 1978

Instructions: Refer to each of the Fixed Asset Record sheets (pages [illegible]).

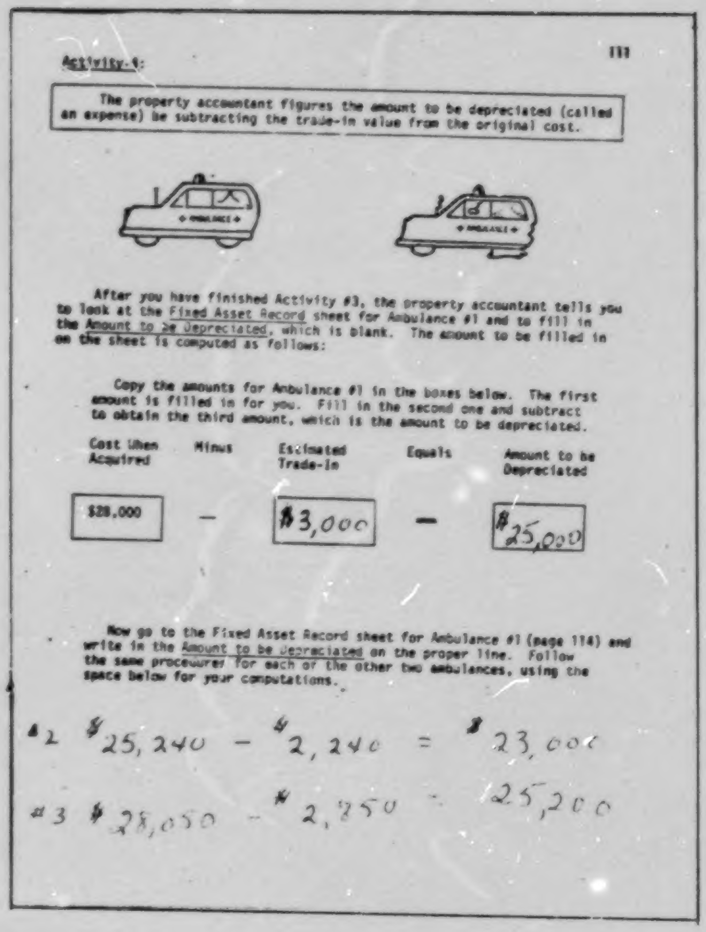
Use the above information to compute the Estimated Life of each ambulance in months. Write the proper number of months for the estimated life of ambulances #1, 2, and 3 on the Fixed Asset Record sheets.

This activity helps the student find out that the useful life of ambulances is determined by the president of a company. Actually guidelines set forth by the Internal Revenue Service must be followed, but some leeway is allowed when the equipment will receive heavy and continuous use. Explain to students that the president of the company must establish the replacement dates.

Refer to key pages 102 and 103 to check students' entries on the "Amount to be Depreciated" lines of the Fixed Asset Record sheets.

KEY - UNIT 5

Activity 4:



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Activity 4:

The property accountant figures the amount to be depreciated (called an expense) be subtracting the trade-in value from the original cost.

After you have finished Activity #3, the property accountant tells you to look at the Fixed Asset Record sheet for Ambulance #1 and to fill in the Amount to be Depreciated, which is blank. The amount to be filled in on the sheet is computed as follows:

Copy the amounts for Ambulance #1 in the boxes below. The first amount is filled in for you. Fill in the second one and subtract to obtain the third amount, which is the amount to be depreciated.

Cost When Acquired	Minus	Estimated Trade-in	Equals	Amount to be Depreciated
$28,000	—	$3,000	—	$25,000

Now go to the Fixed Asset Record sheet for Ambulance #1 (page 114) and write in the Amount to be Depreciated on the proper line. Follow the same proceuurer for each of the other two ambulances, using the space below for your computations.

#2 $25,240 – $2,240 = $23,000

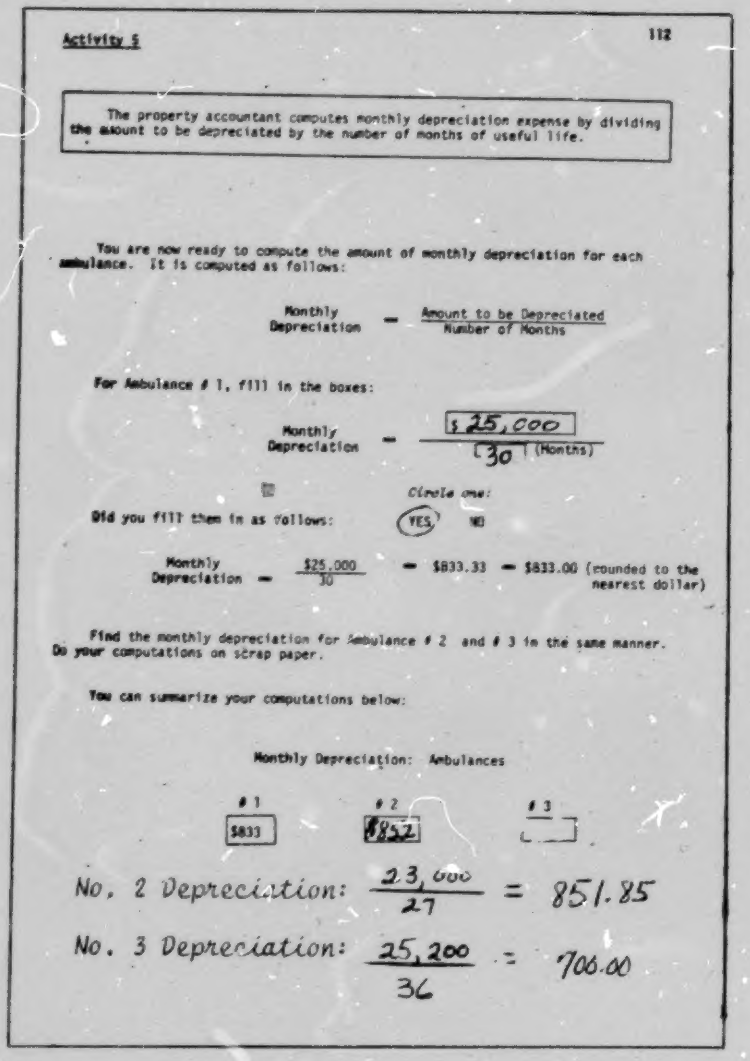
#3 $28,050 – $2,850 - 25,200

This activity requires the student to continue filling in the Fixed Asset Records.

Note that "the amount to be depreciated" is found by subtracting the "estimated trade-in value" from the "cost when acquired."

KEY - UNIT 5

Activity 5:



Activity 5

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The property accountant computes monthly depreciation expense by dividing the amount to be depreciated by the number of months of useful life.

You are now ready to compute the amount of monthly depreciation for each ambulance. It is computed as follows:

$$\text{Monthly Depreciation} = \frac{\text{Amount to be Depreciated}}{\text{Number of Months}}$$

For Ambulance # 1, fill in the boxes:

$$\text{Monthly Depreciation} = \frac{\boxed{\$25{,}000}}{\boxed{30}\ \text{(Months)}}$$

Circle one:

Did you fill them in as follows: [✓ YES] NO

$$\text{Monthly Depreciation} = \frac{\$25{,}000}{30} = \$833.33 = \$833.00 \text{ (rounded to the nearest dollar)}$$

Find the monthly depreciation for Ambulance # 2 and # 3 in the same manner. Do your computations on scrap paper.

You can summarize your computations below:

Monthly Depreciation: Ambulances

# 1	# 2	# 3
$833	$852	

$$\text{No. 2 Depreciation: } \frac{23{,}000}{27} = 851.85$$

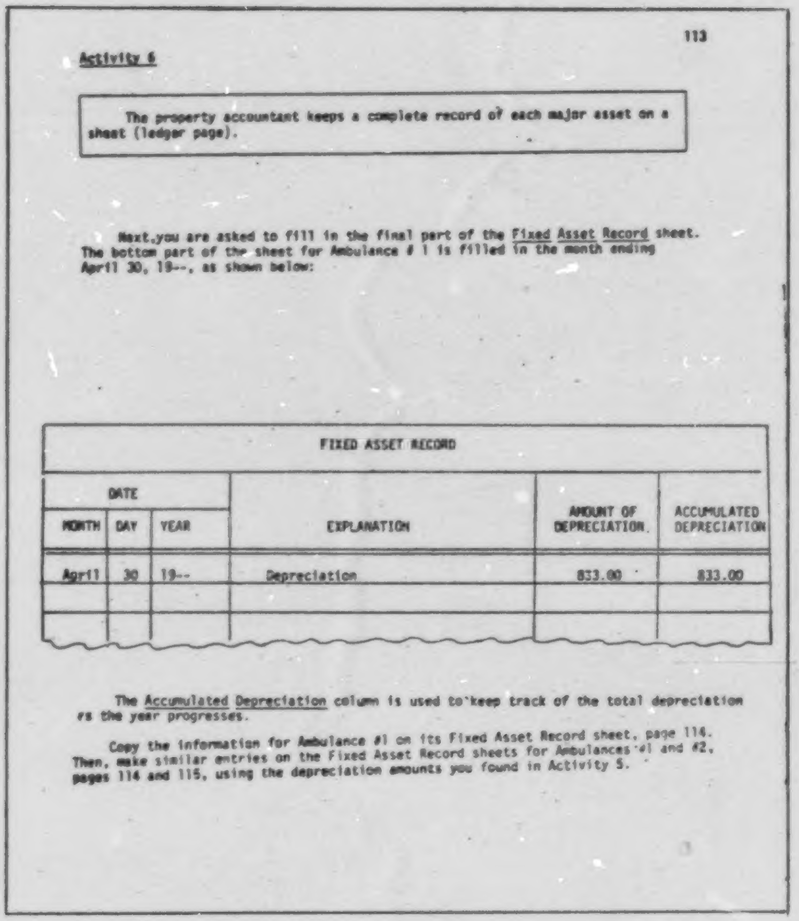
$$\text{No. 3 Depreciation: } \frac{25{,}200}{36} = 700.00$$

This activity teaches the student how to compute the monthly depreciation for each of the three ambulances.

Note that depreciation is normally rounded to the nearest dollar.

KEY - UNIT 5

Activity 6:



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Activity 6

The property accountant keeps a complete record of each major asset on a sheet (ledger page).

Next, you are asked to fill in the final part of the Fixed Asset Record sheet. The bottom part of the sheet for Ambulance # 1 is filled in the month ending April 30, 19--, as shown below:

FIXED ASSET RECORD

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			
April	30	19--	Depreciation	833.00	833.00

The Accumulated Depreciation column is used to keep track of the total depreciation as the year progresses.

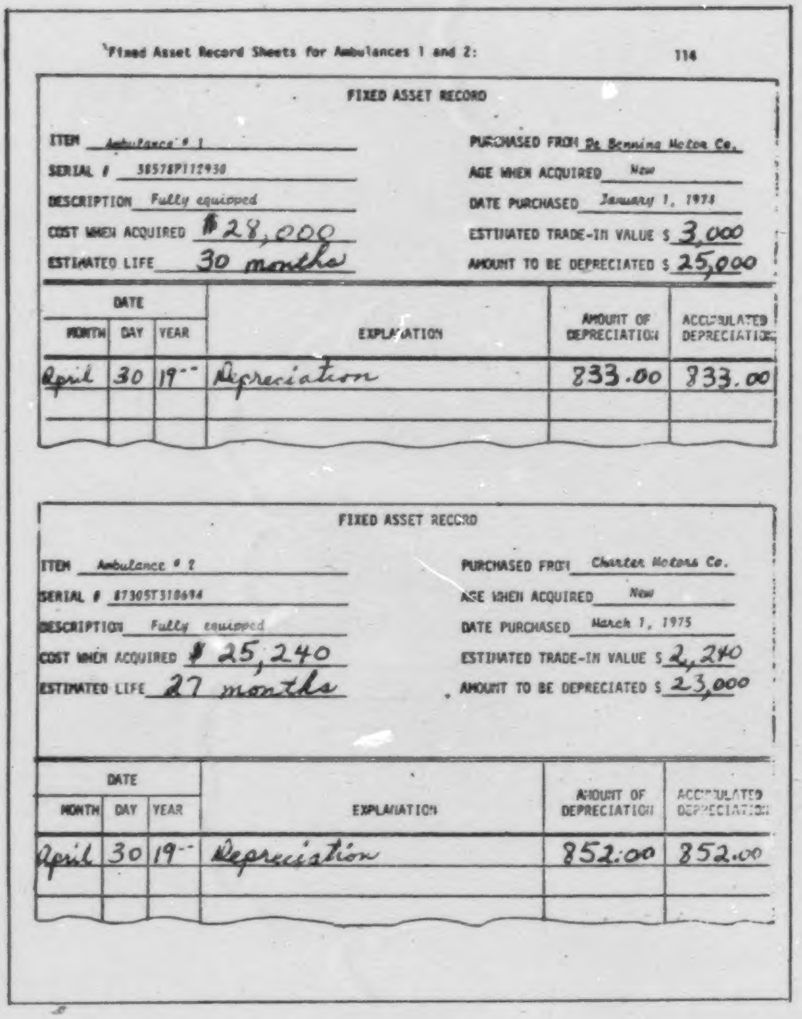
Copy the information for Ambulance #1 on its Fixed Asset Record sheet, page 114. Then, make similar entries on the Fixed Asset Record sheets for Ambulances #1 and #2, pages 114 and 115, using the depreciation amounts you found in Activity 5.

This activity teaches the student how to finish filling out the Fixed Asset Record for the month. Point out to students that in May, the next month, the accumulated depreciation for Ambulance # 1 will be $1,666 ($833 + $833).

Use the key for Fixed Asset Records, pages 102 and 103, to check students' work.

KEY - UNIT 5

Fixed Asset Record Sheets:



Fixed Asset Record Sheets for Ambulances 1 and 2: 114

FIXED ASSET RECORD

ITEM Ambulance # 1
SERIAL # 38578P112930
DESCRIPTION Fully equipped
COST WHEN ACQUIRED $28,000
ESTIMATED LIFE 30 months
PURCHASED FROM De Benning Motor Co.
AGE WHEN ACQUIRED New
DATE PURCHASED January 1, 1974
ESTIMATED TRADE-IN VALUE $ 3,000
AMOUNT TO BE DEPRECIATED $ 25,000

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			
April	30	19--	Depreciation	833.00	833.00

FIXED ASSET RECORD

ITEM Ambulance # 2
SERIAL # 87305T318694
DESCRIPTION Fully equipped
COST WHEN ACQUIRED $ 25,240
ESTIMATED LIFE 27 months
PURCHASED FROM Charter Motors Co.
AGE WHEN ACQUIRED New
DATE PURCHASED March 1, 1975
ESTIMATED TRADE-IN VALUE $ 2,240
AMOUNT TO BE DEPRECIATED $ 23,000

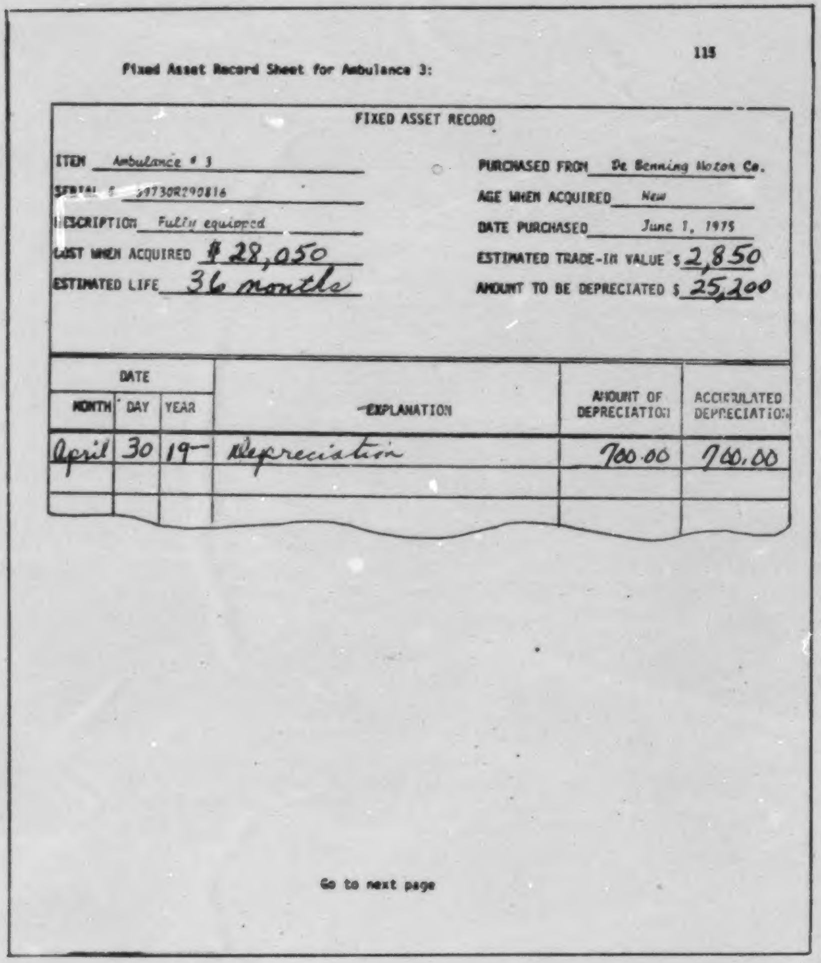
DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			
April	30	19--	Depreciation	852.00	852.00

The Fixed Asset Record Sheets for Ambulances 1 and 2 should be completed as shown above after students finish Activity 6.

The key for the Fixed Asset Record Sheet for Ambulance #3 is shown on the next page.

KEY - UNIT 5

Fixed Asset Record Sheet:



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Fixed Asset Record Sheet for Ambulance 3:

FIXED ASSET RECORD

ITEM Ambulance # 3

SERIAL # 59730R290816

DESCRIPTION Fully equipped

COST WHEN ACQUIRED $28,050

ESTIMATED LIFE 36 months

PURCHASED FROM De Benning Motor Co.

AGE WHEN ACQUIRED New

DATE PURCHASED June 1, 1975

ESTIMATED TRADE-IN VALUE $2,850

AMOUNT TO BE DEPRECIATED $25,200

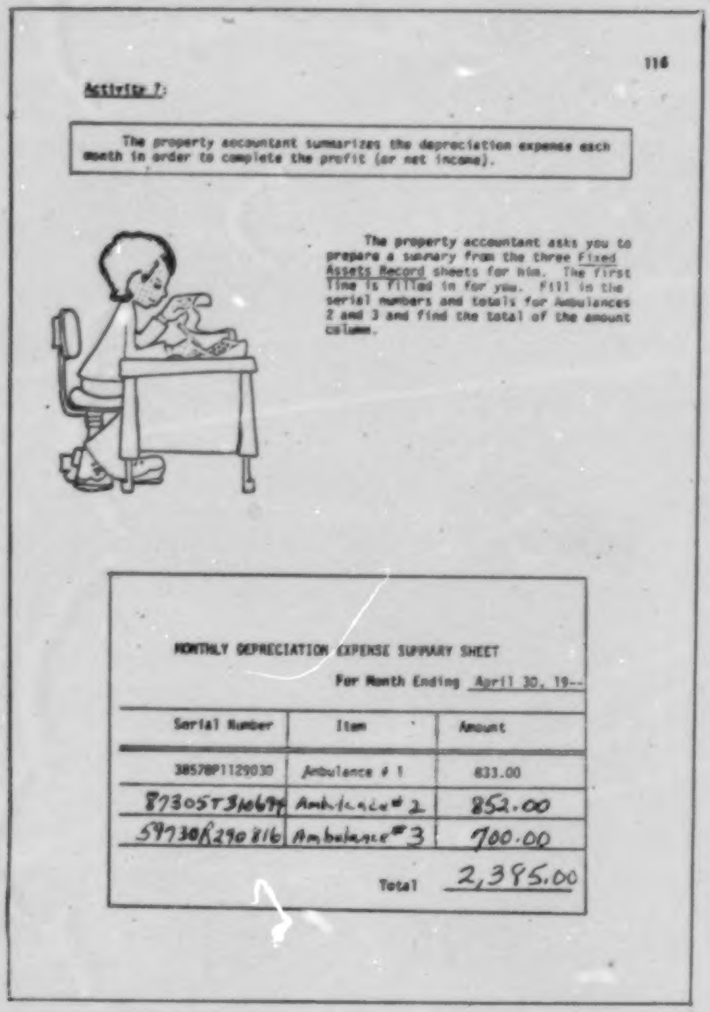
DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			
April	30	19—	Depreciation	700.00	700.00

Go to next page

The Fixed Asset Record Sheet for Ambulance # 3 should be completed as shown above after students finish Activity 6.

KEY - UNIT 5

Activity 7:



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Activity 7:

The property accountant summarizes the depreciation expense each month in order to complete the profit (or net income).

The property accountant asks you to prepare a summary from the three Fixed Assets Record sheets for him. The first line is filled in for you. Fill in the serial numbers and totals for Ambulances 2 and 3 and find the total of the amount column.

MONTHLY DEPRECIATION EXPENSE SUMMARY SHEET

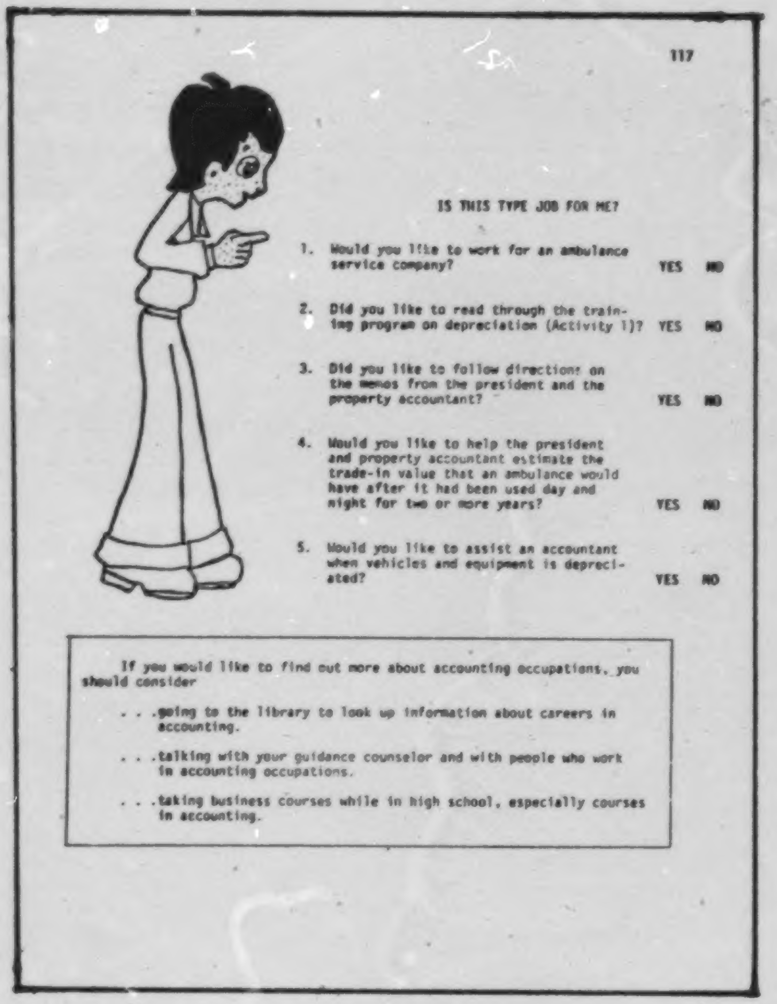
For Month Ending April 30, 19--

Serial Number	Item	Amount
38570P1129030	Ambulance # 1	833.00
87305T310694	Ambulance # 2	852.00
59730R290816	Ambulance # 3	700.00
	Total	2,385.00

This activity teaches the student how to prepare the Monthly Depreciation Expense Sheet, which the accountant will use to prepare reports. Explain to students that such records are extremely imporant since they are used to figure profit and ownership.

KEY - UNIT 5

Activity 8:



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IS THIS TYPE JOB FOR ME?

1. Would you like to work for an ambulance service company? YES NO
2. Did you like to read through the training program on depreciation (Activity 1)? YES NO
3. Did you like to follow directions on the memos from the president and the property accountant? YES NO
4. Would you like to help the president and property accountant estimate the trade-in value that an ambulance would have after it had been used day and night for two or more years? YES NO
5. Would you like to assist an accountant when vehicles and equipment is depreciated? YES NO

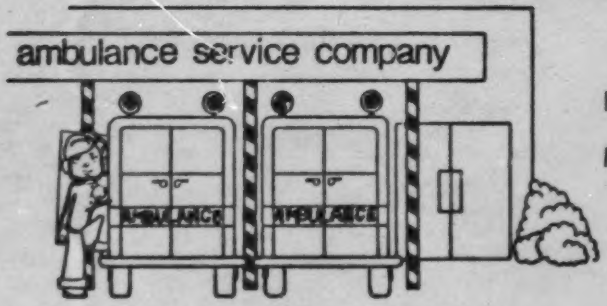
If you would like to find out more about accounting occupations, you should consider

. . .going to the library to look up information about careers in accounting.

. . .talking with your guidance counselor and with people who work in accounting occupations.

. . .taking business courses while in high school, especially courses in accounting.

Call attention to the activities listed in the box at the bottom of the page and encourage interested students to seek more information by going to the sources mentioned.



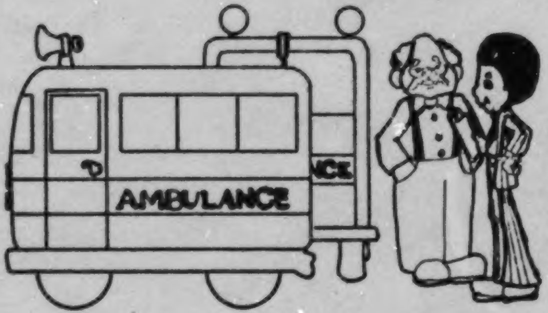
UNIT 5

HOW A PROPERTY ACCOUNTANT IN A MEDICAL SERVICE INDUSTRY USES DIVISION ON THE JOB

Medical and health services are performed by a great variety of people such as physicians, surgeons, nurses, x-ray specialists, ambulance drivers, druggists, pathologists, medical clerks, medical records librarians, and admissions officers for hospitals.

Since an ambulance service is discussed in this unit, you will learn that ambulances cost a great deal of money because they are equipped with all kinds of first aid devices, including oxygen respirators and heart treatment equipment. In addition, they decline rapidly in value.

The man with the clipboard in the illustration at the right is a property accountant. He is appraising the value of the ambulance.



In this unit you will complete seven activities as you assist a property accountant in an ambulance service business. You will learn about depreciation, replacement schedules for ambulances, fixed asset records, and the computation of depreciation of ambulances.

If time is available, you will learn in an optional activity how much something you own has declined in value over time. You will discover that its value now is only a fraction of what you paid. In business and industry, careful records are kept of the decline in value of property since the decline must be properly reported on income tax returns.

Activity 1:

LEARNING ABOUT DEPRECIATION

The ambulance service for which you will work gives you the following training activity on depreciation. As the property accountant, you must complete this activity before starting your job, which begins with Activity 2.

DEPRECIATION TRAINING PROGRAM

The following is a training activity which will help you learn about depreciation. You are to try to fill in all the blanks, checking your answers by referring to the end of the next page. Notice that the answer to the first question actually appears in the question. Please take time to fill in the blanks neatly.

1. You are now going to learn about depreciation of vehicles (automobiles) and other things owned. What is the term you are going to study? ______________________.

2. Many things we own depreciate. Examples include bicycles, transister radios, motorcycles, etc. Even a football ______________________.

3. One reason a thing depreciates is that it becomes worth less on account of wear and tear. The reason that a bicycle becomes worth less after a month of use is due to _________ and __________.

4. Wear and tear causes an automobile to ______________________.

5. One way a thing depreciates is through _________ and __________.

6. Which of the following decline in value because of wear and tear?

   Footballs_____

   Bicycles _____

   Ambulances_____

   Automobiles_________

   Office Buildings_____

7. Wear and tear is only one of two major reasons for the decreasing value of things we own. What do you think another reason might be?_________

   ____.

8. A 1970 10-speed bicycle that had never been ridden a mile probably would not be worth nearly as much as today's 10-speed bicycle of the same or equivalent model. What caused the 1970 bicycle to decline in value?

   ____.

9. Depreciation which is due to the development of new styles, methods, techniques, or efficiency, is known as obsolescence. Retail stores that rip out old-fashioned fronts and display windows and replace them with modern fronts are doing so not only because of wear and tear but also because of ______________________.

10. Obsolescence is pronounced ob-so-les'-cence. (Rhymes with job-so-less-sense.) Which syllable has the strongest accent?

_____________.

11. The technical term for an automobile getting out of date is

______________________________.

12. The City Ambulance Company maintains three ambulances that cost $21,000 ten years ago. Since then, new ambulances have been manufactured that are equipped with respirators and life-saving devices that save the lives of many more accident victims. For what two reasons have the old ambulances decreased in value?

1.__________________________

2.__________________________

Answers:

1. depreciation, 2. depreciates; 3. wear and tear; 4. depreciate; 5. wear and tear; 6. all are subject to wear and tear; 7. Some examples of good answers are growing old, going out of date, new developments, or obsolescence; 8. Any answer such as old, out of date, obsolete, old-fashioned, new features, etc.; 9. obsolescence; 10. les; 11. obsolescence; 12. 1. wear and tear, 2. obsolescence.

[redacted]

Activity 2:

The property accountant keeps a record of each asset (something worth money owned by the business). These records are used to keep track of how the business is "going".

Assume that the property accountant gives you the following memo:

MEMORANDUM

TO: *Property Accounting Office*

DATE: *April 30, 19--*

Below are the amounts that should be recorded on the fixed record cards for ambulances #1, 2, and 3.

H.W.

Ambulance Number	*Cost When Acquired*	*Expected Trade-In Value*
1	*$28,000*	*$3,000*
2	*25,240*	*2,240*
3	*28,050*	*2,850*

He asks you to transfer the cost when acquired and the estimated trade-in value figures shown above to the three Fixed Asset Record sheets shown on pages 114 and 115.

Activity 3:

The property accountant discusses with the owner or president of a business how long each asset (something owned) is expected to be useful before it is traded in. Usually the time is expressed in years or months.

The property accountant gives you another memo dated January 1, 1974, which he received previously from the president of the company. Follow the instructions given at the bottom of the memo.

MEMORANDUM

TO: Property Accounting Office DATE: January 1, 1974

FROM: President's Office

Ambulance Number:	Expected Replacement Date:
1	June 1, 1976
2	June 1, 1977
3	June 1, 1978

Instructions: Refer to each of the Fixed Asset Record sheets (pages 114 and 115).

Use the above information to compute the Estimated Life of each ambulance in months. Write the proper number of months for the estimated life of ambulances #1, 2, and 3 on the Fixed Asset Record sheets.

[redacted]

Activity 4:

The property accountant figures the amount to be depreciated (called an expense) be subtracting the trade-in value from the original cost.

After you have finished Activity #3, the property accountant tells you to look at the Fixed Asset Record sheet for Ambulance #1 and to fill in the Amount to be Depreciated, which is blank. The amount to be filled in on the sheet is computed as follows:

Copy the amounts for Ambulance #1 in the boxes below. The first amount is filled in for you. Fill in the second one and subtract to obtain the third amount, which is the amount to be depreciated.

Cost When Acquired	Minus	Estimated Trade-In	Equals	Amount to be Depreciated
$28,000	—		=	

Now go to the Fixed Asset Record sheet for Ambulance #1 (page 114) and write in the Amount to be Depreciated on the proper line. Follow the same procedures for each of the other two ambulances, using the space below for your computations.

Activity 5

> The property accountant computes monthly depreciation expense by dividing the amount to be depreciated by the number of months of useful life.

You are now ready to compute the amount of monthly depreciation for each ambulance. It is computed as follows:

$$\text{Monthly Depreciation} = \frac{\text{Amount to be Depreciated}}{\text{Number of Months}}$$

For Ambulance # 1, fill in the boxes:

$$\text{Monthly Depreciation} = \frac{\boxed{\$\qquad\qquad}}{\boxed{\qquad}\ \text{(Months)}}$$

Circle one:

Did you fill them in as follows: YES NO

$$\text{Monthly Depreciation} = \frac{\boxed{\$25,000}}{\boxed{30}} = \$833.33 = \$833.00 \text{ (rounded to the nearest dollar)}$$

Find the monthly depreciation for Ambulance # 2 and # 3 in the same manner. Do your computations on scrap paper.

You can summarize your computations below:

Monthly Depreciation: Ambulances

# 1	# 2	# 3
$833		

Activity 6

The property accountant keeps a complete record of each major asset on a sheet (ledger page).

Next, you are asked to fill in the final part of the Fixed Asset Record sheet. The bottom part of the sheet for Ambulance # 1 is filled in the month ending April 30, 19--, as shown below:

FIXED ASSET RECORD

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			
April	30	19--	Depreciation	833.00	833.00

The Accumulated Depreciation column is used to keep track of the total depreciation as the year progresses.

Copy the information for Ambulance #1 on its Fixed Asset Record sheet, page 114. Then, make similar entries on the Fixed Asset Record sheets for Ambulances #1 and #2, pages 114 and 115, using the depreciation amounts you found in Activity 5.

Fixed Asset Record Sheets for Ambulances 1 and 2:

FIXED ASSET RECORD

ITEM Ambulance # 1

SERIAL # 38578P112930

DESCRIPTION Fully equipped

COST WHEN ACQUIRED

ESTIMATED LIFE

PURCHASED FROM De Benning Motor Co.

AGE WHEN ACQUIRED New

DATE PURCHASED January 1, 1974

ESTIMATED TRADE-IN VALUE $

AMOUNT TO BE DEPRECIATED $

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			

FIXED ASSET RECORD

ITEM Ambulance # 2

SERIAL # 87305T310694

DESCRIPTION Fully equipped

COST WHEN ACQUIRED

ESTIMATED LIFE

PURCHASED FROM Charter Motors Co.

AGE WHEN ACQUIRED New

DATE PURCHASED March 1, 1975

ESTIMATED TRADE-IN VALUE $

AMOUNT TO BE DEPRECIATED $

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			

[redacted]

Fixed Asset Record Sheet for Ambulance 3:

FIXED ASSET RECORD

ITEM *Ambulance # 3*

SERIAL # *59730R290816*

DESCRIPTION *Fully equipped*

COST WHEN ACQUIRED

ESTIMATED LIFE

PURCHASED FROM *De Benning Motor Co.*

AGE WHEN ACQUIRED *New*

DATE PURCHASED *June 1, 1975*

ESTIMATED TRADE-IN VALUE $

AMOUNT TO BE DEFRECIATED $

DATE			EXPLANATION	AMOUNT OF DEPRECIATION	ACCUMULATED DEPRECIATION
MONTH	DAY	YEAR			

Go to next page

Activity 7:

The property accountant summarizes the depreciation expense each month in order to complete the profit (or net income).

The property accountant asks you to prepare a summary from the three Fixed Assets Record sheets for him. The first line is filled in for you. Fill in the serial numbers and totals for Ambulances 2 and 3 and find the total of the amount column.

MONTHLY DEPRECIATION EXPENSE SUMMARY SHEET

For Month Ending April 30, 19--

Serial Number	Item	Amount
38578P1129030	Ambulance # 1	833.00

Total ____________

IS THIS TYPE JOB FOR ME?

1. Would you like to work for an ambulance service company? YES NO

2. Did you like to read through the training program on depreciation (Activity 1)? YES NO

3. Did you like to follow directions on the memos from the president and the property accountant? YES NO

4. Would you like to help the president and property accountant estimate the trade-in value that an ambulance would have after it had been used day and night for two or more years? YES NO

5. Would you like to assist an accountant when vehicles and equipment is depreciated? YES NO

If you would like to find out more about accounting occupations, you should consider

. . .going to the library to look up information about careers in accounting.

. . .talking with your guidance counselor and with people who work in accounting occupations.

. . .taking business courses while in high school, especially courses in accounting.

UNIT 6

HOW A PAYROLL ACCOUNTANT IN A TRANSPORTATION INDUSTRY USES FRACTIONS ON THE JOB

PURPOSE:

This unit introduces the student to payroll accounting in the airline industry and at the same time introduces payroll regulations as the result of union contracts.

The transportation industry includes movement of people and goods by train, aircraft, bus, or truck. Certain goods are transported by pipeline.

MAJOR ACTIVITIES:

This unit contains four activities, including the math activities of adding fractions and multiplying amounts of money by hours:

1. Reading and explaining time cards
2. Computing total hours worked and reporting if union regulations are being followed
3. Computing gross pay
4. Is this job for me

Before Class Begins

1. Duplicate and assemble enough copies of the student simulation packet to provide each student with a set.

2. Read the "General Information About Payroll Accounting and Recordkeeping."

During Class

1. Distribute the simulation packets and discuss Activities 1 and 2. Then assign all four activities.

2. Read through the teacher's section including the key.

3. Check all the work with students.

4. Allow sufficient time for students to discuss Activity 4, "Is This Job for Me?"

OPTIONAL ACTIVITIES:

Class Survey

1. Have the students bring in the following information about someone they know who is employed.

   Type of industry______________________________

   Job title_____________________________________

   Union member Yes ☐ No ☐

   Rate of pay $___________ if on an hourly basis

   If on a salary basis, is the pay weekly ☐ semi-monthly ☐ monthly ☐

   Note: Students need not be asked for the name of the person or any other personal information.

2. Have students list all hourly persons by job title, their rate of pay, and their gross pay, assuming they worked 40 hours.

GENERAL INFORMATION ABOUT THE PAYROLL ACCOUNTING PROFESSION

The payroll accounting department of a business or an industry may employ a large number of persons such as time clerks, payroll clerks, an assistant payroll accountant, and a head payroll accountant.

This department computes time worked, gross pay, deductions, and net pay. It also computes the amount of such deductions as social security tax and income tax withheld for federal and state income taxes. The department is involved in a number of interesting aspects of a business or industry, which include administering wages so that good workers are fairly and properly paid and reporting whether union contract regulations are being followed.

Payroll accounting also involves computing overtime. It may include other kinds of wages and salaries, such as weekly or monthly salaries for people employed as supervisors or administrators; also various types of piecework wages apply to employees who are paid by number of items produced. It also includes preparing many state and federal reports.

The payroll accounting department provides a splendid opportunity for young people to enter the total accounting field. Preparation for payroll accounting work includes high school courses for beginners and college courses for those expecting to advance in the total general accounting field.

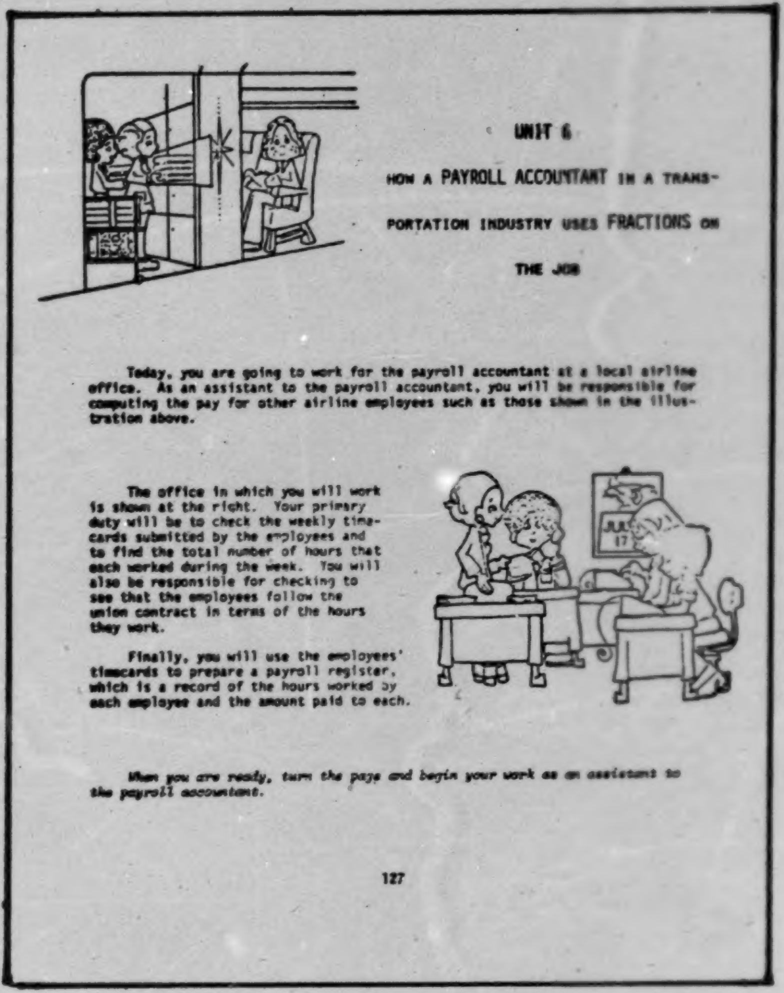
High school courses that specifically prepare for payroll accounting are business mathematics, bookkeeping, accounting, and office machines and practice. College programs include one or two years devoted entirely to accounting and other business courses. Many young people take employment directly out of high school and continue their education in evening college programs, which has the advantage of combining experience with education.

Usually, payroll accounting people like to work with numbers, details of the work records of other employees, and reports to the management of the business or industry, as well as to the various state or federal governments.

KEY - UNIT 6

HOW A PAYROLL ACCOUNTANT IN A TRANSPORTATION INDUSTRY USES FRACTIONS ON THE JOB

Introductory Page of Student Packet:



UNIT 6

HOW A PAYROLL ACCOUNTANT IN A TRANSPORTATION INDUSTRY USES FRACTIONS ON THE JOB

Today, you are going to work for the payroll accountant at a local airline office. As an assistant to the payroll accountant, you will be responsible for computing the pay for other airline employees such as those shown in the illustration above.

The office in which you will work is shown at the right. Your primary duty will be to check the weekly timecards submitted by the employees and to find the total number of hours that each worked during the week. You will also be responsible for checking to see that the employees follow the union contract in terms of the hours they work.

Finally, you will use the employees' timecards to prepare a payroll register, which is a record of the hours worked by each employee and the amount paid to each.

When you are ready, turn the page and begin your work as an assistant to the payroll accountant.

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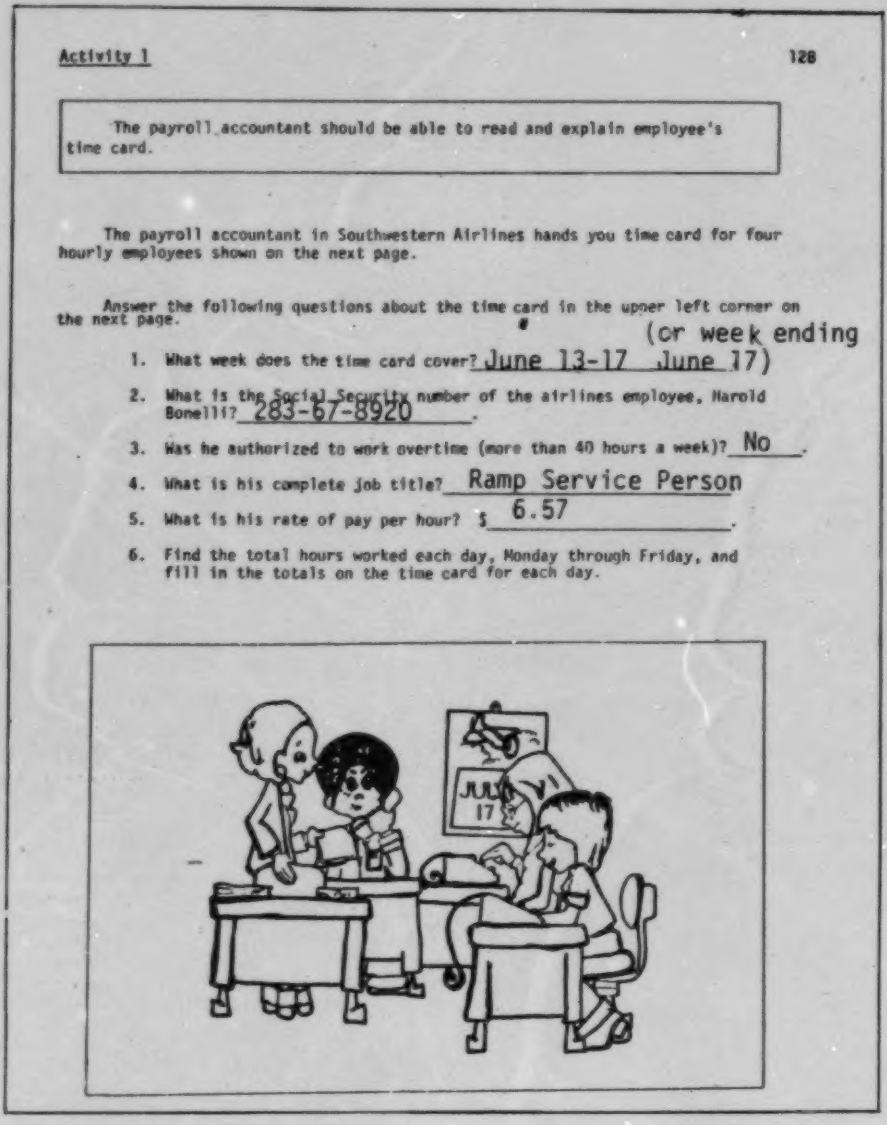
As you discuss the packet introductory page with students, supplement the discussion with information from page 120, "General Information About the Payroll Accounting Profession."

If some your students are acquainted with people who are payroll accountants, payroll clerks, or general accountants, ask them to describe some of the tasks performed by these people and to tell in what types of organization they work.

KEY - UNIT 6

HOW A PAYROLL ACCOUNTANT READS AND EXPLAINS TIME CARDS

Activity 1:



Activity 1 128

The payroll accountant should be able to read and explain employee's time card.

The payroll accountant in Southwestern Airlines hands you time card for four hourly employees shown on the next page.

Answer the following questions about the time card in the upper left corner on the next page.

1. What week does the time card cover? June 13-17 (or week ending June 17)
2. What is the Social Security number of the airlines employee, Harold Bonelli? 283-67-8920.
3. Was he authorized to work overtime (more than 40 hours a week)? No.
4. What is his complete job title? Ramp Service Person
5. What is his rate of pay per hour? $ 6.57.
6. Find the total hours worked each day, Monday through Friday, and fill in the totals on the time card for each day.

This activity teaches the students some important information on time cards or time slips that are filled out by employees themselves.

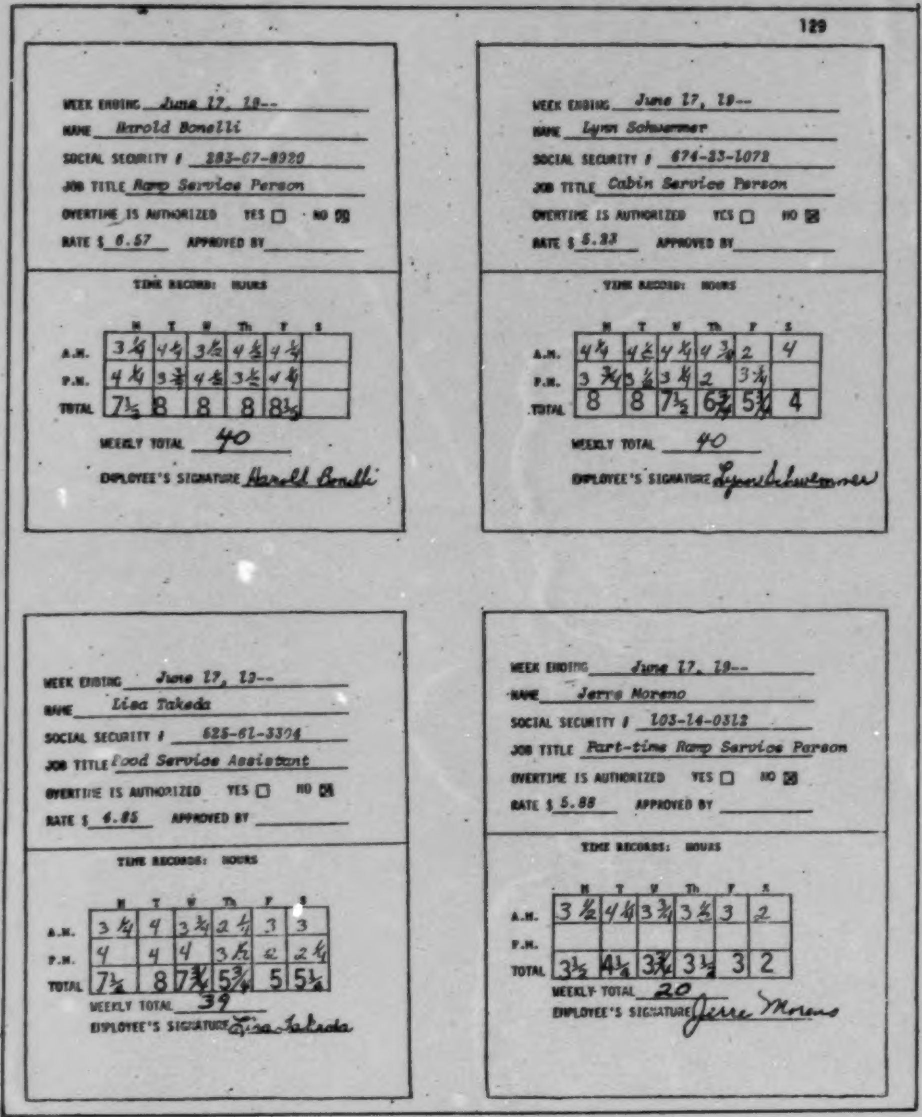
Also, it requires them to add fractions to find daily and weekly hours worked.

Explain to the students that a ramp service person is one who helps load and unload mail pouches, packages, air freight, and baggage on a commercial, or another kind of, airliner. Note that the term person indicates that the jobs are open to men and women.

KEY - UNIT 6

HOW A PAYROLL ACCOUNTANT READS AND EXPLAINS TIME CARDS

Activity 1:
(Continued)



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WEEK ENDING June 17, 19--
NAME Harold Bonelli
SOCIAL SECURITY # 283-67-8920
JOB TITLE Ramp Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 6.57 APPROVED BY

TIME RECORD: HOURS

	M	T	W	Th	F	S
A.M.	3¼	4¼	3½	4½	4¼	
P.M.	4¼	3¾	4½	3½	4¼	
TOTAL	7½	8	8	8	8½	

WEEKLY TOTAL 40
EMPLOYEE'S SIGNATURE Harold Bonelli

WEEK ENDING June 17, 19--
NAME Lynn Schwemmer
SOCIAL SECURITY # 674-23-1072
JOB TITLE Cabin Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 5.23 APPROVED BY

TIME RECORD: HOURS

	M	T	W	Th	F	S
A.M.	4¼	4½	4¼	4¾	2	4
P.M.	3¾	3½	3¼	2	3¼	
TOTAL	8	8	7½	6¾	5¼	4

WEEKLY TOTAL 40
EMPLOYEE'S SIGNATURE Lynn Schwemmer

WEEK ENDING June 17, 19--
NAME Lisa Takeda
SOCIAL SECURITY # 625-61-3394
JOB TITLE Food Service Assistant
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 4.85 APPROVED BY

TIME RECORDS: HOURS

	M	T	W	Th	F	S
A.M.	3¼	4	3¾	2¼	3	3
P.M.	4	4	4	3½	2	2¼
TOTAL	7½	8	7¾	5¾	5	5¼

WEEKLY TOTAL 39
EMPLOYEE'S SIGNATURE Lisa Takeda

WEEK ENDING June 17, 19--
NAME Jerre Moreno
SOCIAL SECURITY # 103-14-0312
JOB TITLE Part-time Ramp Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 5.88 APPROVED BY

TIME RECORDS: HOURS

	M	T	W	Th	F	S
A.M.	3½	4¼	3¾	3½	3	2
P.M.						
TOTAL	3½	4¼	3¾	3½	3	2

WEEKLY TOTAL 20
EMPLOYEE'S SIGNATURE Jerre Moreno

As required by Activity 2, the remainder of the time cards are totaled for daily and weekly hours.

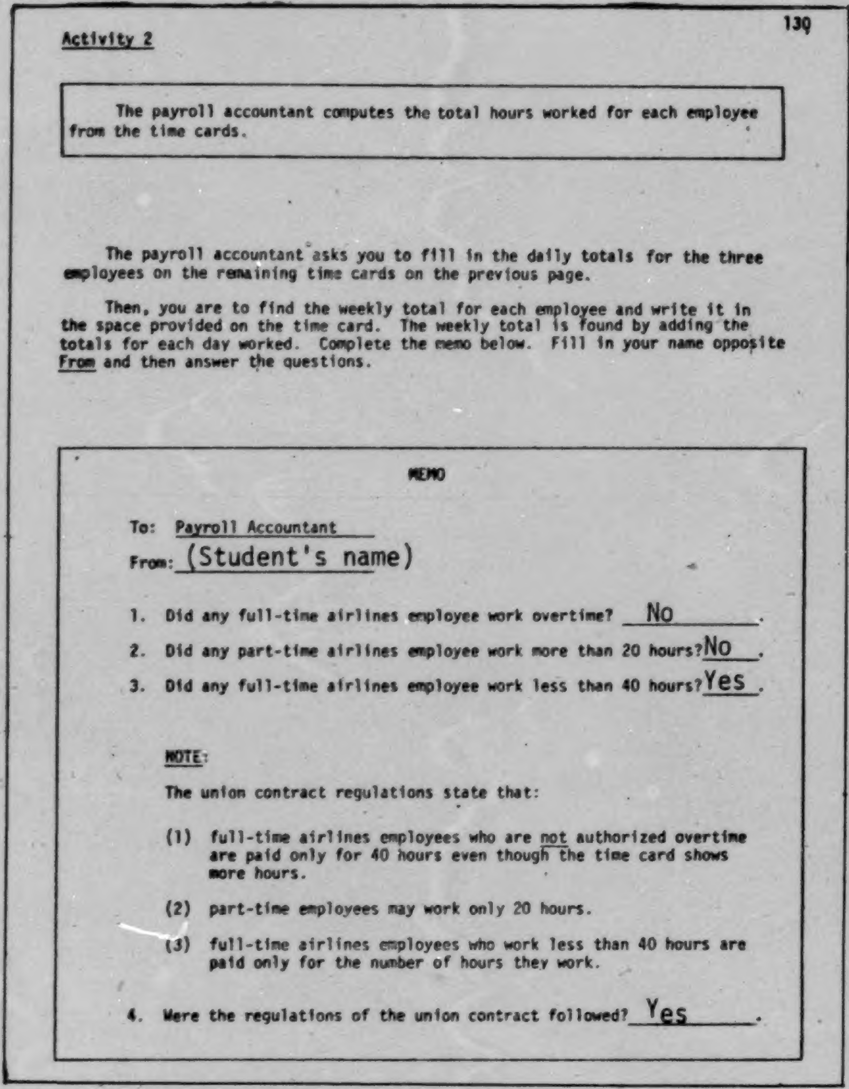
Have students note that each time card is signed by the employee.

Tell the students that the part-time ramp service person is permitted to work only 20 hours a week.

KEY - UNIT 6

HOW A PAYROLL ACCOUNTANT COMPUTES THE TOTAL HOURS WORKED

Activity 2:



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Activity 2

The payroll accountant computes the total hours worked for each employee from the time cards.

The payroll accountant asks you to fill in the daily totals for the three employees on the remaining time cards on the previous page.

Then, you are to find the weekly total for each employee and write it in the space provided on the time card. The weekly total is found by adding the totals for each day worked. Complete the memo below. Fill in your name opposite From and then answer the questions.

MEMO

To: Payroll Accountant
From: (Student's name)

1. Did any full-time airlines employee work overtime? No.
2. Did any part-time airlines employee work more than 20 hours? No.
3. Did any full-time airlines employee work less than 40 hours? Yes.

NOTE:

The union contract regulations state that:

(1) full-time airlines employees who are not authorized overtime are paid only for 40 hours even though the time card shows more hours.

(2) part-time employees may work only 20 hours.

(3) full-time airlines employees who work less than 40 hours are paid only for the number of hours they work.

4. Were the regulations of the union contract followed? Yes.

The answers to problems required in the first two paragraphs are on the previous page.

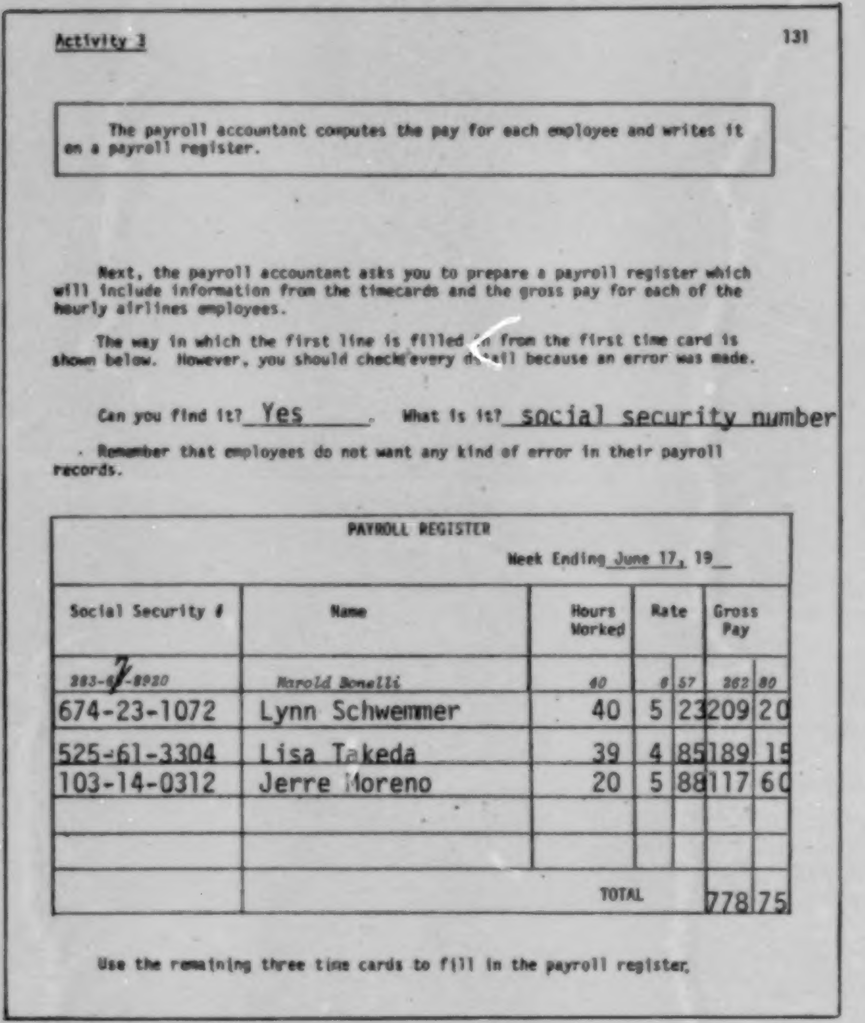
Have students carefully read and fill in the MEMO. Each student should write his/her name after From:

Lead a short discussion on union contract regulations.

KEY - UNIT 6

HOW A PAYROLL ACCOUNTANT COMPUTES THE PAY

Activity 3:



Activity 3

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The payroll accountant computes the pay for each employee and writes it on a payroll register.

Next, the payroll accountant asks you to prepare a payroll register which will include information from the timecards and the gross pay for each of the hourly airlines employees.

The way in which the first line is filled in from the first time card is shown below. However, you should check every detail because an error was made.

Can you find it? Yes . What is it? social security number

Remember that employees do not want any kind of error in their payroll records.

PAYROLL REGISTER

Week Ending June 17, 19__

Social Security #	Name	Hours Worked	Rate		Gross Pay	
283-6[illegible]-8920 7	Harold Bonelli	40	6	57	262	80
674-23-1072	Lynn Schwemmer	40	5	23	209	20
525-61-3304	Lisa Takeda	39	4	85	189	15
103-14-0312	Jerre Moreno	20	5	88	117	60
	TOTAL				778	75

Use the remaining three time cards to fill in the payroll register.

Have students check every detail on the first line of the payroll register. They should first note the error in the social security number.

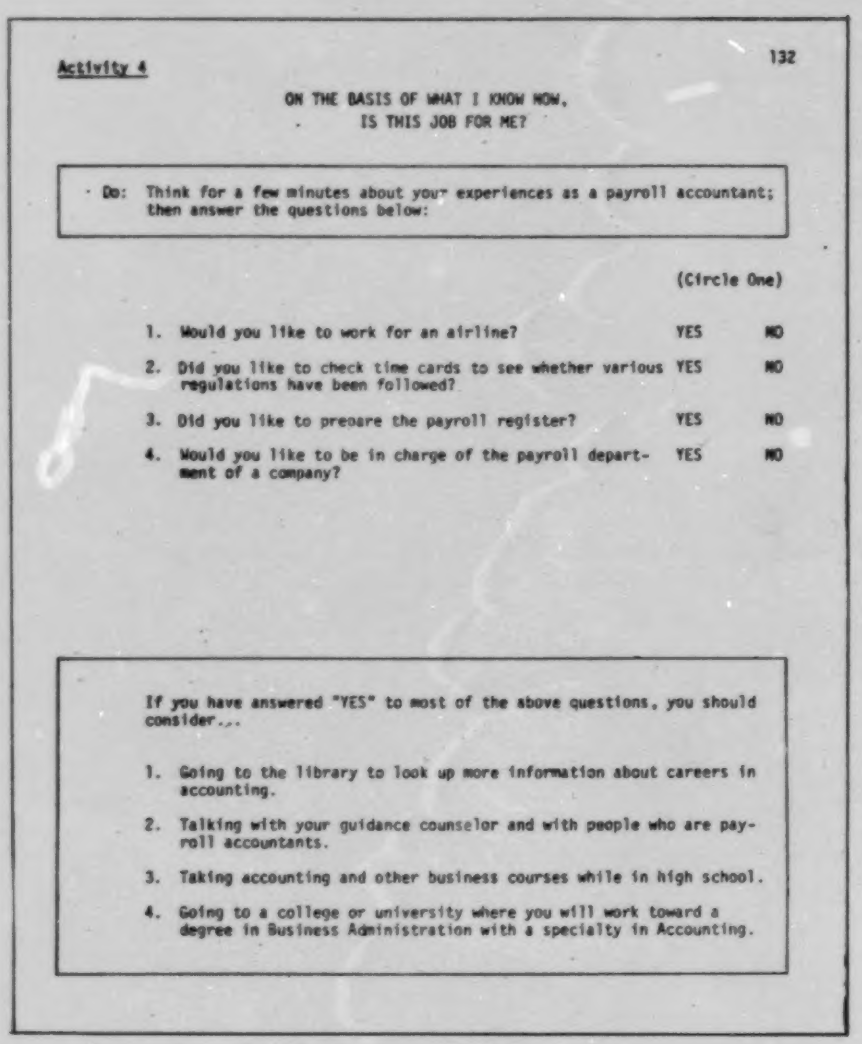
Then, they should check the gross pay of $262.80 by multiplying $6.57 by 40, which is correct.

The remainder of the payroll register should be completed as shown above.

KEY - UNIT 6

ON THE BASIS OF WHAT I KNOW NOW, IS THIS JOB FOR ME?

Activity 4:



Activity 4

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ON THE BASIS OF WHAT I KNOW NOW,
IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as a payroll accountant; then answer the questions below:

(Circle One)

1. Would you like to work for an airline? YES NO
2. Did you like to check time cards to see whether various regulations have been followed? YES NO
3. Did you like to prepare the payroll register? YES NO
4. Would you like to be in charge of the payroll department of a company? YES NO

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are payroll accountants.
3. Taking accounting and other business courses while in high school.
4. Going to a college or university where you will work toward a degree in Business Administration with a specialty in Accounting.

Answers to this activity will naturally vary as students explore their interests.

UNIT 6

HOW A PAYROLL ACCOUNTANT IN A TRANSPORTATION INDUSTRY USES FRACTIONS ON THE JOB

Today, you are going to work for the payroll accountant at a local airline office. As an assistant to the payroll accountant, you will be responsible for computing the pay for other airline employees such as those shown in the illustration above.

The office in which you will work is shown at the right. Your primary duty will be to check the weekly timecards submitted by the employees and to find the total number of hours that each worked during the week. You will also be responsible for checking to see that the employees follow the union contract in terms of the hours they work.

Finally, you will use the employees' timecards to prepare a payroll register, which is a record of the hours worked by each employee and the amount paid to each.

When you are ready, turn the page and begin your work as an assistant to the payroll accountant.

The payroll accountant should be able to read and explain employee's time card.

The payroll accountant in Southwestern Airlines hands you time card for four hourly employees shown below.

Answer the following questions about the time card in the upper left corner on the next page.

1. What week does the time card cover?______________________________.
2. What is the Social Security number of the airlines employee, Harold Bonelli?____________________________.
3. Was he authorized to work overtime (more than 40 hours a week)?_________.
4. What is his complete job title?__________________________________.
5. What is his rate of pay per hour? $______________________________.
6. Find the total hours worked each day, Monday through Friday, and fill in the totals on the time card for each day.

WEEK ENDING June 17, 19--
NAME Harold Bonelli
SOCIAL SECURITY # 283-67-8920
JOB TITLE Ramp Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 6.57 APPROVED BY ____________

TIME RECORD: HOURS

	M	T	W	Th	F	S
A.M.	3 1/4	4 1/4	3 1/2	4 1/2	4 1/4	
P.M.	4 1/4	3 3/4	4 1/2	3 1/2	4 1/4	
TOTAL						

WEEKLY TOTAL ____________
EMPLOYEE'S SIGNATURE Harold Bonelli

WEEK ENDING June 17, 19--
NAME Lynn Schwemmer
SOCIAL SECURITY # 674-23-1072
JOB TITLE Cabin Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 5.23 APPROVED BY ____________

TIME RECORD: HOURS

	M	T	W	Th	F	S
A.M.	4 1/4	4 1/2	4 1/4	4 3/4	2	4
P.M.	3 3/4	3 1/2	3 1/4	2	3 3/4	
TOTAL						

WEEKLY TOTAL ____________
EMPLOYEE'S SIGNATURE Lynn Schwemmer

WEEK ENDING June 17, 19--
NAME Lisa Takeda
SOCIAL SECURITY # 525-61-3304
JOB TITLE Food Service Assistant
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 4.85 APPROVED BY ____________

TIME RECORDS: HOURS

	M	T	W	Th	F	S
A.M.	3 1/4	4	3 3/4	2 1/4	3	3
P.M.	4	4	4	3 1/2	2	2 1/4
TOTAL						

WEEKLY TOTAL ____________
EMPLOYEE'S SIGNATURE Lisa Takeda

WEEK ENDING June 17, 19--
NAME Jerre Moreno
SOCIAL SECURITY # 103-14-0312
JOB TITLE Part-time Ramp Service Person
OVERTIME IS AUTHORIZED YES ☐ NO ☒
RATE $ 5.88 APPROVED BY ____________

TIME RECORDS: HOURS

	M	T	W	Th	F	S
A.M.	3 1/2	4 1/4	3 3/4	3 1/2	3	2
P.M.						
TOTAL						

WEEKLY TOTAL ____________
EMPLOYEE'S SIGNATURE Jerre Moreno

Activity 2

The payroll accountant computes the total hours worked for each employee from the time cards.

The payroll accountant asks you to fill in the daily totals for the three employees on the remaining time cards on the previous page.

Then, you are to find the weekly total for each employee and write it in the space provided on the time card. The weekly total is found by adding the totals for each day worked. Complete the memo below. Fill in your name opposite From and then answer the questions.

MEMO

To: Payroll Accountant

From: ____________________

1. Did any full-time airlines employee work overtime? ______________.
2. Did any part-time airlines employee work more than 20 hours?______.
3. Did any full-time airlines employee work less than 40 hours?______.

NOTE:

The union contract regulations state that:

(1) full-time airlines employees who are not authorized overtime are paid only for 40 hours even though the time card shows more hours.

(2) part-time employees may work only 20 hours.

(3) full-time airlines employees who work less than 40 hours are paid only for the number of hours they work.

4. Were the regulations of the union contract followed?____________.

The payroll accountant computes the pay for each employee and writes it on a payroll register.

Next, the payroll accountant asks you to prepare a payroll register which will include information from the timecards and the gross pay for each of the hourly airlines employees.

The way in which the first line is filled in from the first time card is shown below. However, you should check every detail because an error was made.

Can you find it?____________. What is it?__________________________.

Remember that employees do not want any kind of error in their payroll records.

PAYROLL REGISTER

Week Ending June 17, 19__

Social Security #	Name	Hours Worked	Rate		Gross Pay	
283-66-8920	*Harold Bonelli*	*40*	*6*	*57*	*262*	*80*
				TOTAL		

Use the remaining three time cards to fill in the payroll register shown above.

Activity 4

ON THE BASIS OF WHAT I KNOW NOW, IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as a payroll accountant; then answer the questions below:

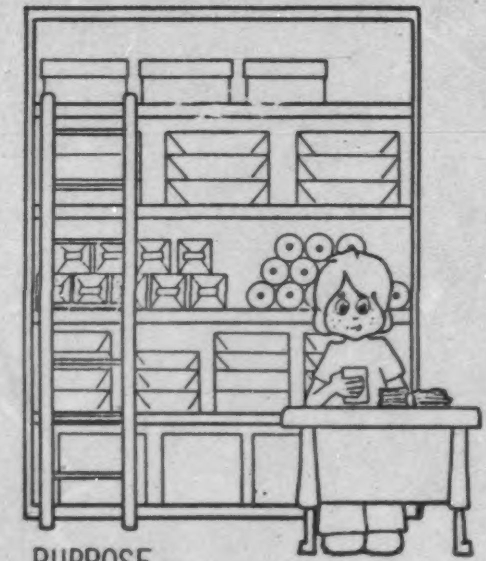
(Circle One)

1. Would you like to work for an airline? YES NO
2. Did you like to check time cards to see whether various regulations have been followed? YES NO
3. Did you like to prepare the payroll register? YES NO
4. Would you like to be in charge of the payroll department of a company? YES NO

AIRWAY INTERNATI

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in accounting.
2. Talking with your guidance counselor and with people who are payroll accountants.
3. Taking accounting and other business courses while in high school.
4. Going to a college or university where you will work toward a degree in Business Administration with a specialty in Accounting.



UNIT 7

HOW AN INVENTORY CONTROL CLERK FOR A SPORTING GOODS COMPANY USES RATIOS AND PROPORTIONS ON THE JOB

PURPOSE

The purpose of this unit is to introduce students to the job of inventory control clerk while giving them an opportunity to apply their knowledge of ratios and proportions in completing the activities of an inventory control clerk.

MAJOR ACTIVITIES

The major activities of this unit are simulations of the tasks performed by an inventory control clerk who works for *Ball One*, a large sporting goods company. The purpose of the first activity in the simulation is merely to familiarize students with stock record cards which are kept by the inventory control clerk. In the remaining activities, however, students must use ratios and proportions to complete the activities.

Before Class Begins:

1. Duplicate enough copies of the simulation packet (pages 142-147) to provide each student with a set.
2. Read the "General Information About the Occupation of Inventory Control Clerk," which is on page 135; then scan the teacher's key to the activities.

During Class:

1. Distribute the simulation packets; read and discuss the introductory page (142) with students.
2. Ask students to complete the simulation activities. While they are busy with their tasks, you may wish to read through all of the information in the teacher's key, which begins on page 136.
3. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the keys to each of the activities.
4. If time permits, use one or more of the optional activities listed on the following page to conclude the unit.

OPTIONAL ACTIVITIES

1. Taking Inventory in the Classroom:

   Appoint, or elect, one or two *inventory control clerks* to inventory, record, and organize all materials in the classroom. Items might be grouped into such categories as furniture, equipment, supplies, textbooks, workbooks, and so forth. Ask the class to give the class inventory control clerk suggestions on how to take the inventory and how to record the inventory information.

2. Taking A Personal Inventory:

   Encourage students to inventory their own personal effects both at school and at home. Suggest that they keep the inventory list they prepare, adding to or subtracting from the list as they acquire or dispose of personal possessions. Discuss the importance of having such an inventory list for insurance purposes in case one's home should be destroyed by fire.

3. Job Status and Prestige:

   Discuss with students how all jobs hold varying degrees of status and prestige. Point out that while a manager may, in the eyes of some, have more prestige than an inventory control clerk, the business could not be successful if the inventory control clerk does not do a good job. People in all occupations within the organization are important to the successful operation of the organization. Lead students to the idea that doing a job well should give all of us a great deal of job satisfaction, regardless of what our jobs are.

4. Guest Speaker:

   Invite a stockroom or warehouse manager or employee, or a distributive education teacher, to visit your class to discuss the operation and management of a stockroom or warehouse.

GENERAL INFORMATION ABOUT THE OCCUPATION OF INVENTORY CONTROL CLERK

Inventory control clerks are people who work in stockrooms or warehouses and who are primarily responsible for receiving, storing, and issuing goods or merchandise. They are also responsible for keeping accurate records of all goods received at, stored in, and issued from the stockroom.

The inventory control clerks are expected to keep a watch over the items in the stockroom and to reorder items when the inventory of those items reaches a certain predetermined minimum level. In some organizations, the "minimum inventory" to be kept on hand is based on a ratio of inventory to the average sales for one, two, or three months.

When goods are received at the stockroom or warehouse, the inventory control clerks must check the goods received against the invoice or shipping order to see that the shipment is complete. They then store the goods on shelves, in bins, or in other allotted spaces, and they record the amount of goods stored on an inventory card which is generally called the stock record card.

As goods are needed to fill customers' orders or for use by other employees in their work, the inventory control clerks take the goods requested from storage. They note the amount of goods given out on the stock record card and subtract to find the new balance on hand in the stockroom. Also, they periodically take a physical inventory of goods to check the accuracy of their records.

Some of the work done by inventory control clerks requires physical stamina and strength. For example, they must do a lot of lifting since they store and give out goods, some of which may be very heavy. Often inventory control clerks must stand on their feet for long periods of time while taking inventory and while storing and retreiving goods from the storage shelves or bins.

High school graduates are generally preferred for inventory control clerk positions. New employees are usually given on-the-job training under the supervision of an experienced worker, but business arithmetic, recordkeeping, typing, and other high school business subjects are helpful in preparing for the work. The ability to write legible is also very important since the stock records must be accurate and legible. Finally, employers seek employees who will be dependable and who will be interested in learning about the firm's business activities.

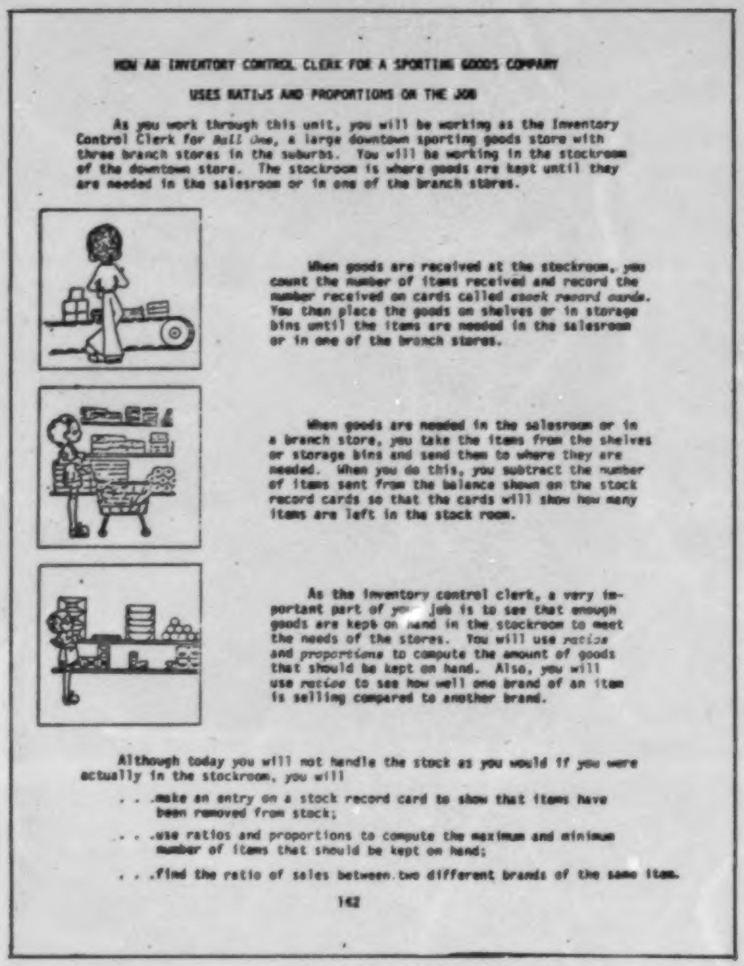
To find current salaries of inventory control clerks, look at the employment ads in the classified section of your local newspaper or call your local state employment office.

Inventory control clerks might also be known by such titles as stock clerk, stockroom clerk, stock attendant, stockroom attendant, stockperson, and so forth.

KEY - UNIT 7

HOW AN INVENTORY CONTROL CLERK FOR A SPORTING GOODS COMPANY USES RATIOS AND PROPORTIONS ON THE JOB

Introductory Page of Student Packet:



HOW AN INVENTORY CONTROL CLERK FOR A SPORTING GOODS COMPANY

USES RATIOS AND PROPORTIONS ON THE JOB

As you work through this unit, you will be working as the Inventory Control Clerk for *Ball One*, a large downtown sporting goods store with three branch stores in the suburbs. You will be working in the stockroom of the downtown store. The stockroom is where goods are kept until they are needed in the salesroom or in one of the branch stores.

When goods are received at the stockroom, you count the number of items received and record the number received on cards called *stock record cards*. You then place the goods on shelves or in storage bins until the items are needed in the salesroom or in one of the branch stores.

When goods are needed in the salesroom or in a branch store, you take the items from the shelves or storage bins and send them to where they are needed. When you do this, you subtract the number of items sent from the balance shown on the stock record cards so that the cards will show how many items are left in the stock room.

As the inventory control clerk, a very important part of your job is to see that enough goods are kept on hand in the stockroom to meet the needs of the stores. You will use *ratios* and *proportions* to compute the amount of goods that should be kept on hand. Also, you will use *ratios* to see how well one brand of an item is selling compared to another brand.

Although today you will not handle the stock as you would if you were actually in the stockroom, you will

. . .make an entry on a stock record card to show that items have been removed from stock;

. . .use ratios and proportions to compute the maximum and minimum number of items that should be kept on hand;

. . .find the ratio of sales between two different brands of the same item.

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As you discuss the packet introductory page with students, supplement the discussion with information from page 135, "General Information About Inventory Control Clerks."

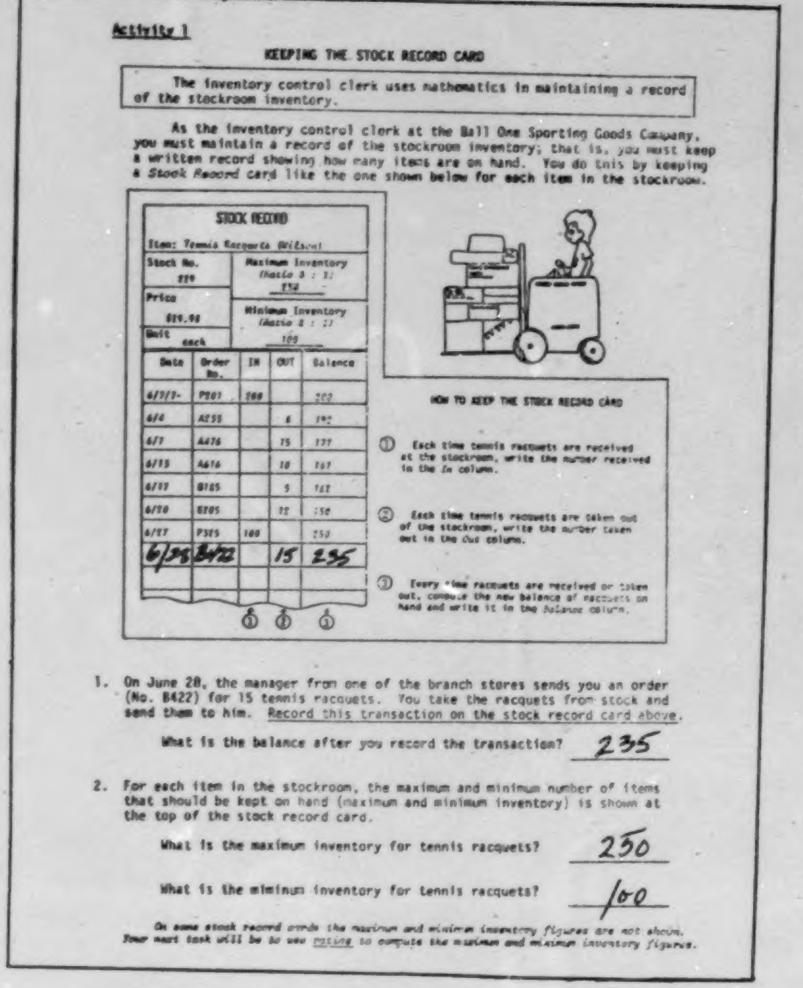
Discuss other titles that an inventory control clerk might be known by: stock clerk, stockroom clerk, stock attendant, stockroom attendant, stockman, stockwoman, and so forth. Ask students to try to name other occupations in which several different titles are used to describe the occupation (Example: Lawyer, attorney, counselor, barrister).

If some of your students are acquainted with inventory control clerks, ask those students to tell what they know about the job.

KEY - UNIT 7

KEEPING THE STOCK RECORD CARD

Activity 1



Activity 1

KEEPING THE STOCK RECORD CARD

The inventory control clerk uses mathematics in maintaining a record of the stockroom inventory.

As the inventory control clerk at the Ball One Sporting Goods Company, you must maintain a record of the stockroom inventory; that is, you must keep a written record showing how many items are on hand. You do this by keeping a *Stock Record* card like the one shown below for each item in the stockroom.

STOCK RECORD

Item: Tennis Racquets (Wilson)

Stock No. [illegible]	Maximum Inventory (Ratio [illegible] : 1) [illegible]
Price $19.98 Unit each	Minimum Inventory (Ratio [illegible] : 1) 100

Date	Order No.	IN	OUT	Balance
6/1/[illegible]	P201	200		200
6/4	A255		6	194
6/7	A476		15	179
6/13	A616		10	169
6/17	B185		5	[illegible]
6/20	B205		[illegible]	150
6/27	P325	100		250
6/28	B422		15	235

① ② ③

HOW TO KEEP THE STOCK RECORD CARD

① Each time tennis racquets are received at the stockroom, write the number received in the *In* column.

② Each time tennis racquets are taken out of the stockroom, write the number taken out in the *Out* column.

③ Every time racquets are received or taken out, compute the new balance of racquets on hand and write it in the *Balance* column.

1. On June 28, the manager from one of the branch stores sends you an order (No. B422) for 15 tennis racquets. You take the racquets from stock and send them to him. Record this transaction on the stock record card above.

   What is the balance after you record the transaction? 235

2. For each item in the stockroom, the maximum and minimum number of items that should be kept on hand (maximum and minimum inventory) is shown at the top of the stock record card.

   What is the maximum inventory for tennis racquets? 250

   What is the minimum inventory for tennis racquets? 100

On some stock record cards the maximum and minimum inventory figures are not shown. Your next task will be to use ratios to compute the maximum and minimum inventory figures.

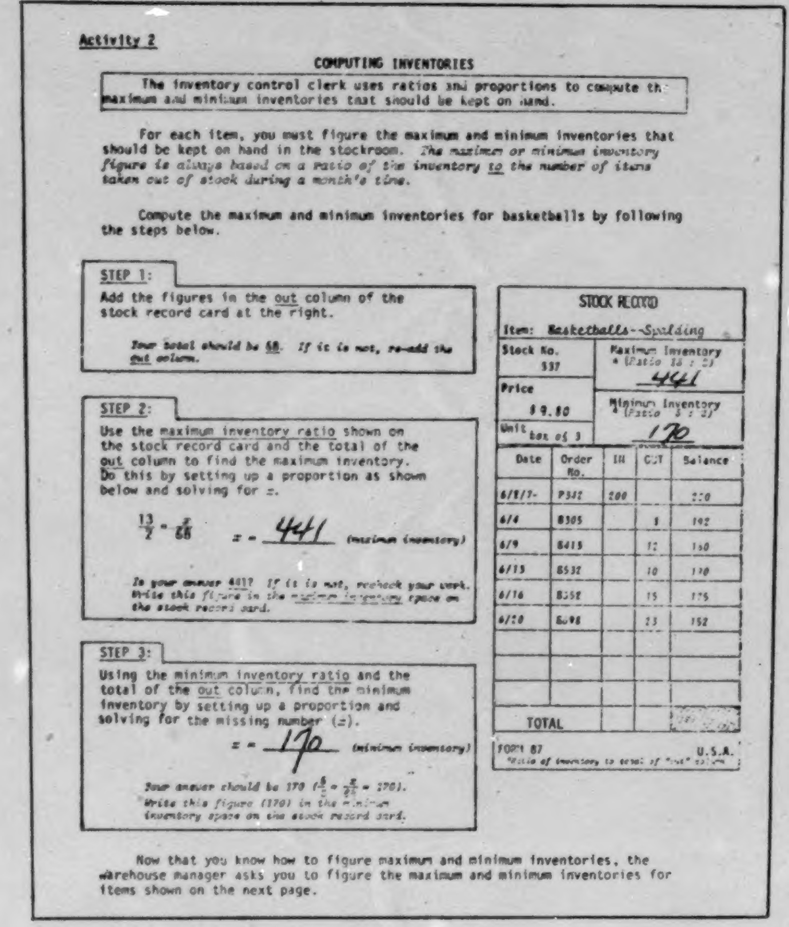
In Activity 1, students make an entry on the stock record card to show that 15 tennis racquets were removed from the stockroom inventory. This entry and the answers to items 1 and 2 of the activity are shown in the illustration above.

The purpose of Activity 1 is to acquaint students with stock record cards, including the maximum and minimum inventory spaces on the cards. In Activity 2, students will use ratios and proportions to compute the maximum and minimum inventories.

KEY - UNIT 7

USING RATIOS AND PROPORTIONS TO COMPUTE INVENTORIES

Activity 2:



Activity 2

COMPUTING INVENTORIES

The inventory control clerk uses ratios and proportions to compute the maximum and minimum inventories that should be kept on hand.

For each item, you must figure the maximum and minimum inventories that should be kept on hand in the stockroom. *The maximum or minimum inventory figure is always based on a ratio of the inventory to the number of items taken out of stock during a month's time.*

Compute the maximum and minimum inventories for basketballs by following the steps below.

STEP 1:

Add the figures in the out column of the stock record card at the right.

Your total should be 68. If it is not, re-add the out column.

STEP 2:

Use the maximum inventory ratio shown on the stock record card and the total of the out column to find the maximum inventory. Do this by setting up a proportion as shown below and solving for x.

$\frac{13}{2} = \frac{x}{68}$ $x =$ 441 (maximum inventory)

Is your answer 441? If it is not, recheck your work. Write this figure in the maximum inventory space on the stock record card.

STEP 3:

Using the minimum inventory ratio and the total of the out column, find the minimum inventory by setting up a proportion and solving for the missing number (x).

$x =$ 170 (minimum inventory)

Your answer should be 170 ($\frac{5}{2} = \frac{x}{68} = 170$). Write this figure (170) in the minimum inventory space on the stock record card.

STOCK RECORD

Item: Basketballs--Spalding

Stock No. 537	Maximum Inventory * (Ratio 13 : 2) 441
Price $9.80	Minimum Inventory * (Ratio 5 : 2) 170
Unit box of 3	

Date	Order No.	IN	OUT	Balance
6/2/7-	P342	200		200
6/4	B305		8	192
6/9	B413		12	180
6/13	B532		10	170
6/16	B352		15	155
6/20	B498		23	132
TOTAL				

FORM 87 U.S.A.

*Ratio of inventory to total of "out" column

Now that you know how to figure maximum and minimum inventories, the warehouse manager asks you to figure the maximum and minimum inventories for items shown on the next page.

On the first page of Activity 2, students are shown how to compute the maximum and minimum inventories for an item by using ratios shown in the maximum and minimum inventory spaces on the stock record card.

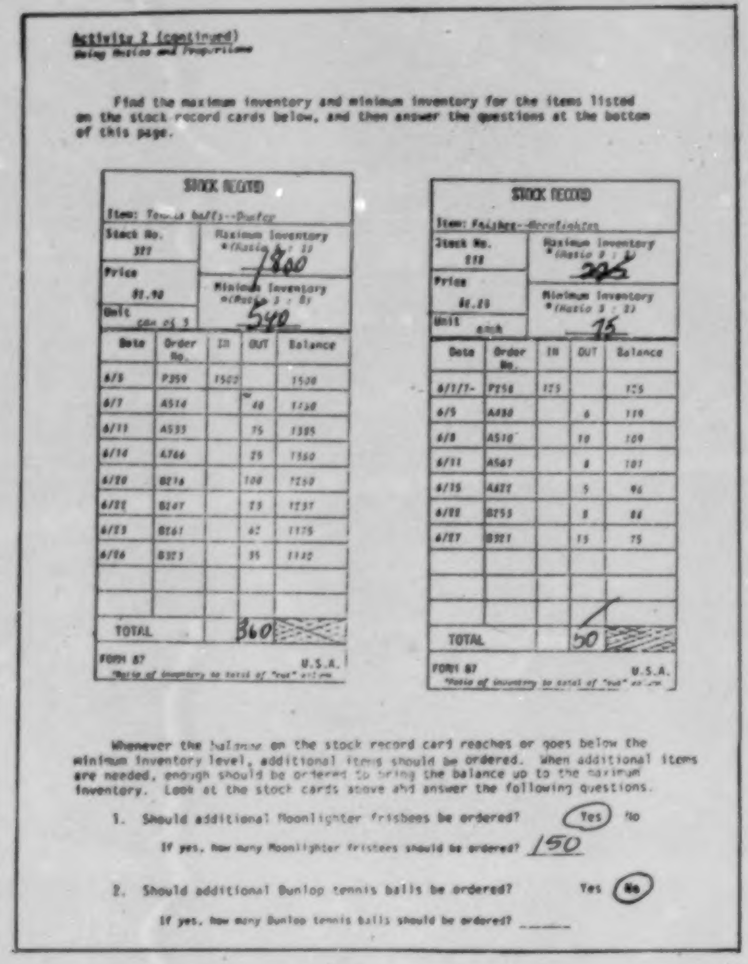
The correct answer for each step in this activity is given to students so that they can see whether they have worked the problem correctly before they do the problems on the second page of Activity 2.

Discuss with students the fact that the inventory control clerk needs to know the maximum and minimum inventory that should be kept on hand for each item in the storeroom. This is important because if too many items are kept on hand space is wasted and the store will have too much money tied up in goods that are not needed to meet customers' demands. If too few items are kept on hand, the store may run out of an item and the customer will go elsewhere to buy.

KEY - UNIT 7

USING RATIOS AND PROPORTIONS TO COMPUTE INVENTORIES

Activity 2 (Con't.)



Activity 2 (continued)
Using Ratios and Proportions

Find the maximum inventory and minimum inventory for the items listed on the stock record cards below, and then answer the questions at the bottom of this page.

STOCK RECORD

Item: Tennis balls--Dunlop				
Stock No. 327		Maximum Inventory *(Ratio 5 : 1) 1800		
Price $1.90		Minimum Inventory *(Ratio 3 : 2) 540		
Unit can of 3				
Date	Order No.	IN	OUT	Balance
6/3	P359	1500		1500
6/7	A514		40	1460
6/11	A535		75	1385
6/14	A766		25	1360
6/20	B216		100	1260
6/22	B247		23	1237
6/23	B261		62	1175
6/26	B323		35	1140
TOTAL			360	

FORM 87 U.S.A.
*Ratio of inventory to total of "out" column

STOCK RECORD

Item: Frisbee--Moonlighter				
Stock No. 818		Maximum Inventory *(Ratio 9 : 2) 225		
Price $0.25		Minimum Inventory *(Ratio 3 : 2) 75		
Unit each				
Date	Order No.	IN	OUT	Balance
6/1/7-	P258	125		125
6/5	A480		6	119
6/8	A510		10	109
6/11	A567		8	101
6/15	A621		5	96
6/22	B255		8	88
6/27	B321		13	75
TOTAL			50	

FORM 87 U.S.A.
*Ratio of inventory to total of "out" column

Whenever the balance on the stock record card reaches or goes below the minimum inventory level, additional items should be ordered. When additional items are needed, enough should be ordered to bring the balance up to the maximum inventory. Look at the stock cards above and answer the following questions.

1. Should additional Moonlighter frisbees be ordered? [✓ Yes] No

   If yes, how many Moonlighter frisbees should be ordered? 150

2. Should additional Dunlop tennis balls be ordered? Yes [✓ No]

   If yes, how many Dunlop tennis balls should be ordered? ______

The correct maximum and minimum inventories are shown on the stock record cards above. The proportions that students should have used to arrive at these inventories are shown below:

Tennis balls--Dunlop

Maximum inventory:

$$\frac{5}{1} = \frac{x}{360} \qquad x = 1{,}800$$

Minimum inventory:

$$\frac{3}{2} = \frac{x}{360} \qquad 2x = 1{,}080$$

$$x = \frac{1{,}080}{2} = \underline{540}$$

Frisbee--Moonlighter

Maximum inventory:

$$\frac{9}{2} = \frac{x}{50} \qquad 2x = 450$$

$$x = \frac{450}{2} = \underline{225}$$

Minimum inventory:

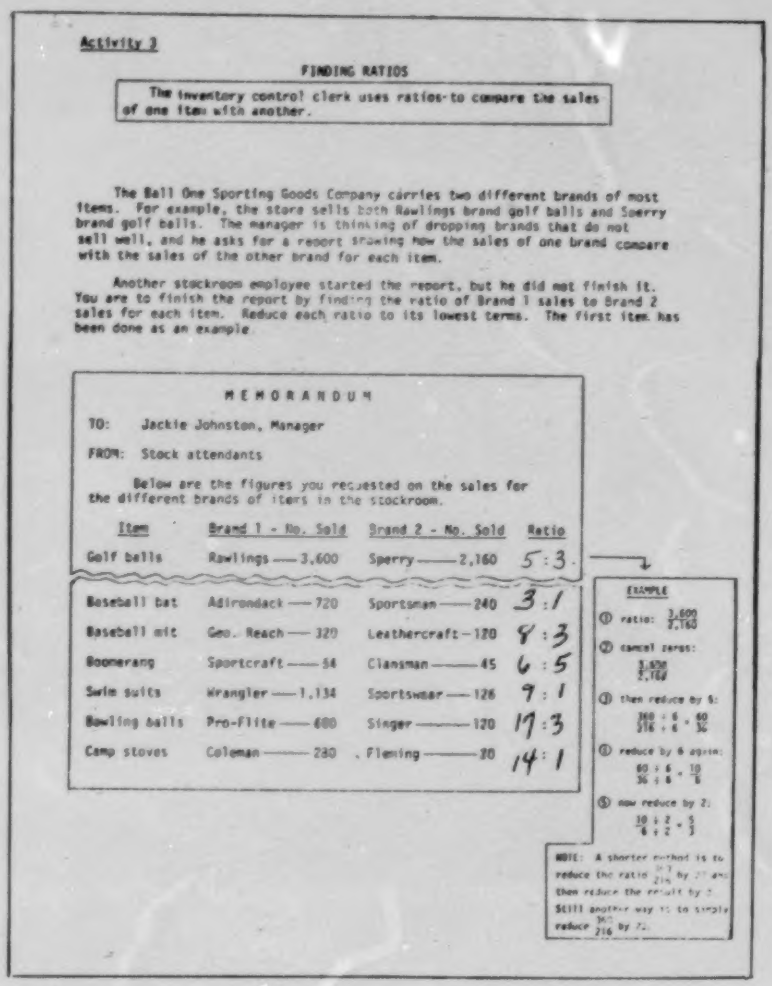
$$\frac{3}{2} = \frac{x}{50} \qquad 2x = 150$$

$$x = \frac{150}{2} = \underline{75}$$

KEY - UNIT 7

FINDING RATIOS

Activity 3:



Activity 3

FINDING RATIOS

The inventory control clerk uses ratios to compare the sales of one item with another.

The Ball One Sporting Goods Company carries two different brands of most items. For example, the store sells both Rawlings brand golf balls and Sperry brand golf balls. The manager is thinking of dropping brands that do not sell well, and he asks for a report showing how the sales of one brand compare with the sales of the other brand for each item.

Another stockroom employee started the report, but he did not finish it. You are to finish the report by finding the ratio of Brand 1 sales to Brand 2 sales for each item. Reduce each ratio to its lowest terms. The first item has been done as an example.

M E M O R A N D U M

TO: Jackie Johnston, Manager

FROM: Stock attendants

Below are the figures you requested on the sales for the different brands of items in the stockroom.

Item	Brand 1 - No. Sold	Brand 2 - No. Sold	Ratio
Golf balls	Rawlings —— 3,600	Sperry —— 2,160	5 : 3
Baseball bat	Adirondack —— 720	Sportsman —— 240	3 : 1
Baseball mit	Geo. Reach —— 320	Leathercraft – 120	8 : 3
Boomerang	Sportcraft —— 54	Clansman —— 45	6 : 5
Swim suits	Wrangler —— 1,134	Sportswear —— 126	9 : 1
Bowling balls	Pro-Flite —— 680	Singer —— 120	17 : 3
Camp stoves	Coleman —— 280	Fleming —— 20	14 : 1

EXAMPLE

① ratio: $\frac{3,600}{2,160}$

② cancel zeros:

$\frac{3,60\cancel{0}}{2,16\cancel{0}}$

③ then reduce by 6:

$\frac{360 \div 6}{216 \div 6} = \frac{60}{36}$

④ reduce by 6 again:

$\frac{60 \div 6}{36 \div 6} = \frac{10}{6}$

⑤ now reduce by 2:

$\frac{10 \div 2}{6 \div 2} = \frac{5}{3}$

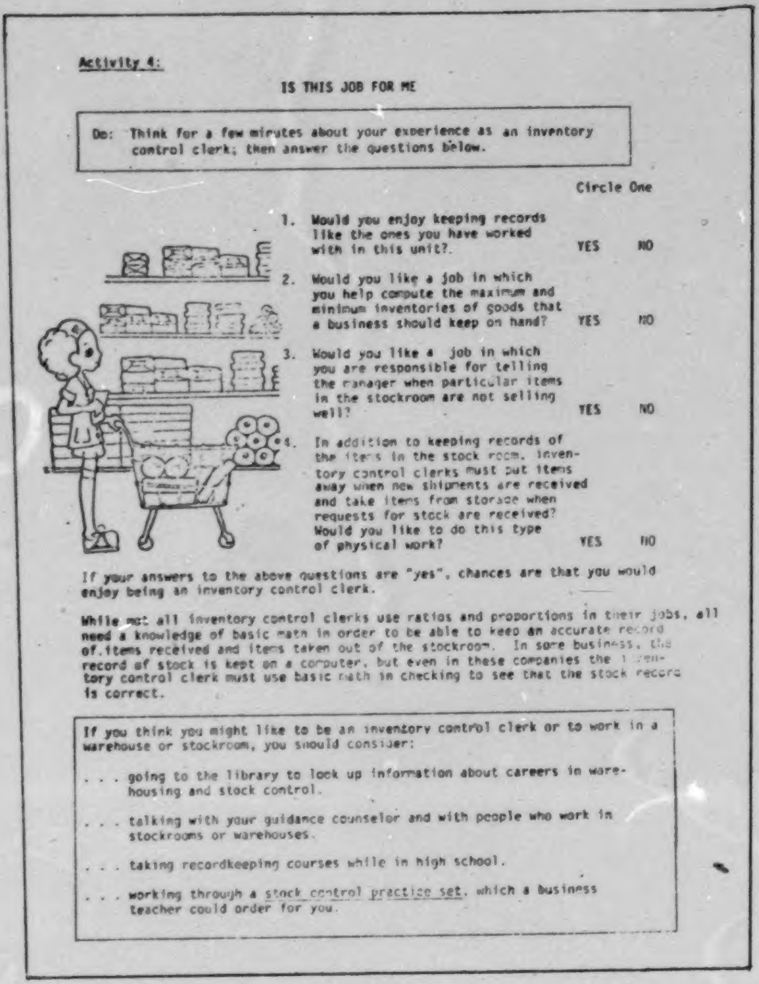
NOTE: A shorter method is to reduce the ratio $\frac{360}{216}$ by 36 and then reduce the result by 2. Still another way is to simply reduce $\frac{360}{216}$ by 72.

Students should have completed the memorandum report shown above by finding the ratio of Brand 1 sales to Brand 2 sales for each item and reducing each ratio to its lowest terms. The correct ratios are shown in the illustration above.

KEY - UNIT 7

IS THIS JOB FOR ME?

Activity 4:



Activity 4:

IS THIS JOB FOR ME

Do: Think for a few minutes about your experience as an inventory control clerk; then answer the questions below.

Circle One

1. Would you enjoy keeping records like the ones you have worked with in this unit?. YES NO
2. Would you like a job in which you help compute the maximum and minimum inventories of goods that a business should keep on hand? YES NO
3. Would you like a job in which you are responsible for telling the manager when particular items in the stockroom are not selling well? YES NO
4. In addition to keeping records of the items in the stock room, inventory control clerks must put items away when new shipments are received and take items from storage when requests for stock are received? Would you like to do this type of physical work? YES NO

If your answers to the above questions are "yes", chances are that you would enjoy being an inventory control clerk.

While not all inventory control clerks use ratios and proportions in their jobs, all need a knowledge of basic math in order to be able to keep an accurate record of items received and items taken out of the stockroom. In some business, the record of stock is kept on a computer, but even in these companies the inventory control clerk must use basic math in checking to see that the stock record is correct.

If you think you might like to be an inventory control clerk or to work in a warehouse or stockroom, you should consider:

. . . going to the library to look up information about careers in warehousing and stock control.

. . . talking with your guidance counselor and with people who work in stockrooms or warehouses.

. . . taking recordkeeping courses while in high school.

. . . working through a stock control practice set, which a business teacher could order for you.

Individual student response to the questions on this sheet will vary; however, after this brief unit, students should have some knowledge of the inventory control clerk's job.

Call attention to the activities listed in the second "box" on this sheet and encourage interested students to seek more information by going to the sources mentioned.

HOW AN INVENTORY CONTROL CLERK FOR A SPORTING GOODS COMPANY USES RATIOS AND PROPORTIONS ON THE JOB

As you work through this unit, you will be working as the Inventory Control Clerk for *Ball One*, a large downtown sporting goods store with three branch stores in the suburbs. You will be working in the stockroom of the downtown store. The stockroom is where goods are kept until they are needed in the salesroom or in one of the branch stores.

When goods are received at the stockroom, you count the number of items received and record the number received on cards called *stock record cards*. You then place the goods on shelves or in storage bins until the items are needed in the salesroom or in one of the branch stores.

When goods are needed in the salesroom or in a branch store, you take the items from the shelves or storage bins and send them to where they are needed. When you do this, you subtract the number of items sent from the balance shown on the stock record cards so that the cards will show how many items are left in the stock room.

As the inventory control clerk, a very important part of your job is to see that enough goods are kept on hand in the stockroom to meet the needs of the stores. You will use *ratios* and *proportions* to compute the amount of goods that should be kept on hand. Also, you will use *ratios* to see how well one brand of an item is selling compared to another brand.

Although today you will not handle the stock as you would if you were actually in the stockroom, you will

. . .make an entry on a stock record card to show that items have been removed from stock;

. . .use ratios and proportions to compute the maximum and minimum number of items that should be kept on hand;

. . .find the ratio of sales between two different brands of the same item.

KEEPING THE STOCK RECORD CARD

The inventory control clerk uses mathematics in maintaining a record of the stockroom inventory.

As the inventory control clerk at the Ball One Sporting Goods Company, you must maintain a record of the stockroom inventory; that is, you must keep a written record showing how many items are on hand. You do this by keeping a *Stock Record* card like the one shown below for each item in the stockroom.

STOCK RECORD

Item: *Tennis Racquets (Wilson)*

Stock No. 229	**Maximum Inventory** *(Ratio 5 : 1)* 250
Price $29.98	**Minimum Inventory** *(Ratio 2 : 1)* 100
Unit each	

Date	Order No.	IN	OUT	Balance
6/7/7-	P201	200		200
6/4	A233		8	192
6/7	A476		15	177
6/13	A616		10	167
6/17	B185		5	162
6/20	B205		12	150
6/27	P325	100		250
		①	②	③

HOW TO KEEP THE STOCK RECORD CARD

① Each time tennis racquets are received at the stockroom, write the number received in the *In* column.

② Each time tennis racquets are taken out of the stockroom, write the number taken out in the *Out* column.

③ Every time racquets are received or taken out, compute the new balance of racquets on hand and write it in the *Balance* column.

1. On June 28, the manager from one of the branch stores sends you an order (No. B422) for 15 tennis racquets. You take the racquets from stock and send them to him. Record this transaction on the stock record card above.

   What is the balance after you record the transaction? ________

2. For each item in the stockroom, the maximum and minimum number of items that should be kept on hand (maximum and minimum inventory) is shown at the top of the stock record card.

   What is the maximum inventory for tennis racquets? ________

   What is the miminum inventory for tennis racquets? ________

On some stock record cards the maximum and minimum inventory figures are not shown. Your next task will be to use ratios to compute the maximum and minimum inventory figures.

Activity 2

COMPUTING INVENTORIES

The inventory control clerk uses ratios and proportions to compute the maximum and minimum inventories that should be kept on hand.

For each item, you must figure the maximum and minimum inventories that should be kept on hand in the stockroom. *The maximum or minimum inventory figure is always based on a ratio of the inventory to the number of items taken out of stock during a month's time.*

Compute the maximum and minimum inventories for basketballs by following the steps below.

STEP 1:

Add the figures in the out column of the stock record card at the right.

Your total should be 68. If it is not, re-add the out column.

STEP 2:

Use the maximum inventory ratio shown on the stock record card and the total of the out column to find the maximum inventory. Do this by setting up a proportion as shown below and solving for x.

$$\frac{13}{2} = \frac{x}{68}$$

$x =$ ________ *(maximum inventory)*

Is your answer 441? If it is not, recheck your work. Write this figure in the maximum inventory space on the stock record card.

STEP 3:

Using the minimum inventory ratio and the total of the out column, find the minimum inventory by setting up a proportion and solving for the missing number (x).

$x =$ ________ *(minimum inventory)*

Your answer should be 170 ($\frac{5}{2} = \frac{x}{68} = 170$). Write this figure (170) in the minimum inventory space on the stock record card.

STOCK RECORD

Item: *Basketballs--Spalding*

Stock No. 537	Maximum Inventory * (Ratio 13 : 2) ________
Price $9.80	Minimum Inventory * (Ratio 5 : 2) ________
Unit box of 3	

Date	Order No.	IN	OUT	Balance
6/2/7-	P342	200		200
6/4	B305		8	192
6/9	B413		12	180
6/13	B532		10	190
6/16	B652		15	175
6/20	B698		23	152
TOTAL				▨

FORM 87 U.S.A.

*Ratio of inventory to total of "out" column

Now that you know how to figure maximum and minimum inventories, the warehouse manager asks you to figure the maximum and minimum inventories for items shown on the next page.

Find the maximum inventory and minimum inventory for the items listed on the stock record cards below, and then answer the questions at the bottom of this page.

STOCK RECORD

Item: *Tennis balls--Dunlop*

Stock No. *322*	Maximum Inventory *(*Ratio 5 : 1*) ________
Price *$2.90*	Minimum Inventory *(*Ratio 3 : 2*) ________
Unit *can of 3*	

Date	Order No.	IN	OUT	Balance
6/3	P359	*1500*		*1500*
6/7	A514		*40*	*1460*
6/11	A535		*75*	*1385*
6/14	A766		*25*	*1360*
6/20	B216		*100*	*1260*
6/22	B247		*23*	*1237*
6/23	B261		*62*	*1175*
6/26	B323		*35*	*1140*
TOTAL				▨

FORM 87 U.S.A.
**Ratio of inventory to total of "out" column*

STOCK RECORD

Item: *Frisbee--Moonlighter*

Stock No. *218*	Maximum Inventory *(*Ratio 9 : 2*) ________
Price *$2.25*	Minimum Inventory *(*Ratio 3 : 2*) ________
Unit *each*	

Date	Order No.	IN	OUT	Balance
6/1/7-	P258	*125*		*125*
6/5	A480		*6*	*119*
6/8	A510		*10*	*109*
6/11	A567		*8*	*101*
6/15	A822		*5*	*96*
6/22	B253		*8*	*88*
6/27	B321		*13*	*75*
TOTAL				▨

FORM 87 U.S.A.
**Ratio of inventory to total of "out" column*

Whenever the *balance* on the stock record card reaches or goes below the minimum inventory level, additional items should be ordered. When additional items are needed, enough should be ordered to bring the balance up to the maximum inventory. Look at the stock cards above and answer the following questions.

1. Should additional Moonlighter frisbees be ordered? Yes No

   If yes, how many Moonlighter frisbees should be ordered? ________

2. Should additional Dunlop tennis balls be ordered? Yes No

   If yes, how many Dunlop tennis balls should be ordered? ________

FINDING RATIOS

The inventory control clerk uses ratios to compare the sales of one item with another.

The Ball One Sporting Goods Company carries two different brands of most items. For example, the store sells both Rawlings brand golf balls and Sperry brand golf balls. The manager is thinking of dropping brands that do not sell well, and he asks for a report showing how the sales of one brand compare with the sales of the other brand for each item.

Another stockroom employee started the report, but he did not finish it. You are to finish the report by finding the ratio of Brand 1 sales to Brand 2 sales for each item. Reduce each ratio to its lowest terms. The first item has been done as an example.

MEMORANDUM

TO: Jackie Johnston, Manager

FROM: Stock attendants

Below are the figures you requested on the sales for the different brands of items in the stockroom.

Item	Brand 1 - No. Sold	Brand 2 - No. Sold	Ratio
Golf balls	Rawlings —— 3,600	Sperry —— 2,160	5 : 3
Baseball bat	Adirondack —— 720	Sportsman —— 240	:
Baseball mit	Geo. Reach —— 320	Leathercraft — 120	:
Boomerang	Sportcraft —— 54	Clansman —— 45	:
Swim suits	Wrangler —— 1,134	Sportswear —— 126	:
Bowling balls	Pro-Flite —— 680	Singer —— 120	:
Camp stoves	Coleman —— 280	Fleming —— 20	:

EXAMPLE

① ratio: $\frac{3,600}{2,160}$

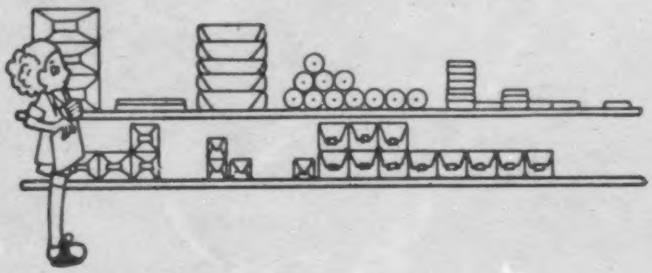
② cancel zeros: $\frac{3,60\cancel{0}}{2,16\cancel{0}}$

③ then reduce by 6: $\frac{360 \div 6}{216 \div 6} = \frac{60}{36}$

④ reduce by 6 again: $\frac{60 \div 6}{36 \div 6} = \frac{10}{6}$

⑤ now reduce by 2: $\frac{10 \div 2}{6 \div 2} = \frac{5}{3}$

NOTE: A shorter method is to reduce the ratio $\frac{360}{216}$ by 36 and then reduce the result by 2. Still another way is to simply reduce $\frac{360}{216}$ by 72.



Activity 4:

IS THIS JOB FOR ME

Do: Think for a few minutes about your experience as an inventory control clerk; then answer the questions below.

Circle One

1. Would you enjoy keeping records like the ones you have worked with in this unit? YES NO

2. Would you like a job in which you help compute the maximum and minimum inventories of goods that a business should keep on hand? YES NO

3. Would you like a job in which you are responsible for telling the manager when particular items in the stockroom are not selling well? YES NO

4. In addition to keeping records of the items in the stock room, inventory control clerks must put items away when new shipments are received and take items from storage when requests for stock are received? Would you like to do this type of physical work? YES NO

If your answers to the above questions are "yes", chances are that you would enjoy being an inventory control clerk.

While not all inventory control clerks use ratios and proportions in their jobs, all need a knowledge of basic math in order to be able to keep an accurate record of items received and items taken out of the stockroom. In some business, the record of stock is kept on a computer, but even in these companies the inventory control clerk must use basic math in checking to see that the stock record is correct.

If you think you might like to be an inventory control clerk or to work in a warehouse or stockroom, you should consider:

. . . going to the library to look up information about careers in warehousing and stock control.

. . . talking with your guidance counselor and with people who work in stockrooms or warehouses.

. . . taking recordkeeping courses while in high school.

. . . working through a stock control practice set, which a business teacher could order for you.

UNIT 8

HOW A SECRETARY FOR A CONSTRUCTION COMPANY WORKS WITH PERCENTAGES AND INTEREST

PURPOSE:

This unit places a focus on the math skills needed by a secretary who works for a small construction company.

MAJOR ACTIVITIES:

While working through Activities 1 and 2, your students will reinforce skills in working with percentages as they complete a "Cost Sheet" and a "Lumber Work Sheet." Activity 3 will provide them with an opportunity to compute the interest due on two promissory notes; and while working on Activity 4, your students will compare the interest rates required by three lending institutions.

Before Class Begins:

1. Duplicate and assemble enough copies of the student activities (pages 157-162) to provide each student with a set.
2. Read the "General Information About the Job of a Secretary," which is on page 150; then scan the keys which follow.

During Class:

1. Distribute the sets of student activities; read and discuss the introductory page (157) with students.
2. Ask students to complete the activities on pages 158-162. While they are busy, you may wish to read through all of the information on the Keys, which begin on page 151.

During Class: (Continued)

3. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the Keys to the Student Activities.

OPTIONAL ACTIVITIES:

1. GUEST SPEAKER:

   Invite a local owner or manager of a construction company to speak to your class on the way mathematics is used in the building industry.

2. USING THE NEWSPAPER:

   Have students check the want-ad section of a local newspaper and list job openings in the building industry. You may want to extend this by having them total the number of openings and then compute the percentage of each type.

GENERAL INFORMATION ABOUT THE JOB OF A SECRETARY

The most important aspect of any secretary's job involves communicating. Specific duties may vary, but nearly all fully qualified secretaries perform the following tasks:

- opening and processing mail
- taking dictation
- transcribing dictation from shorthand or machine-made symbols
- receiving information over the telephone
- relieving an employer of routine administrative details
- making appointments and reservations for employers
- communicating with clients, customers, and visitors
- recording, filing, and retrieving information
- duplicating or photo-copying records, reports, and correspondence
- typing on forms such as invoices and purchase orders

Some secretaries supervise other personnel, gather reference materials for an employer, write checks, and keep petty cash records. The special duties performed by the secretary, whose job is described in this unit, include: working with percentages while completing "cost" and "lumber work sheets," computing interest due on promissory notes, and comparing the interest rates charged by different lending institutions.

Generally, employers look for the following background and abilities when considering a prospective secretary:

- high school diploma
- secretarial skills, which include typewriting, shorthand, filing, some accounting, business machines, and business arithmetic
- ability to use standard English and to spell correctly
- experience either as a full-time stenographer or as a work-study student performing secretarial duties
- good references from previous employers and teachers

Some secretaries specialize in a particular field. For example, a secretary with appropriate training and/or experience, may be classified as a legal, medical, or technical secretary.

Secretaries have their own private organization, The National Secretaries Association. By passing a rather rigorous test, a secretary may earn the rights and privileges accorded to a "Certified Public Secretary."

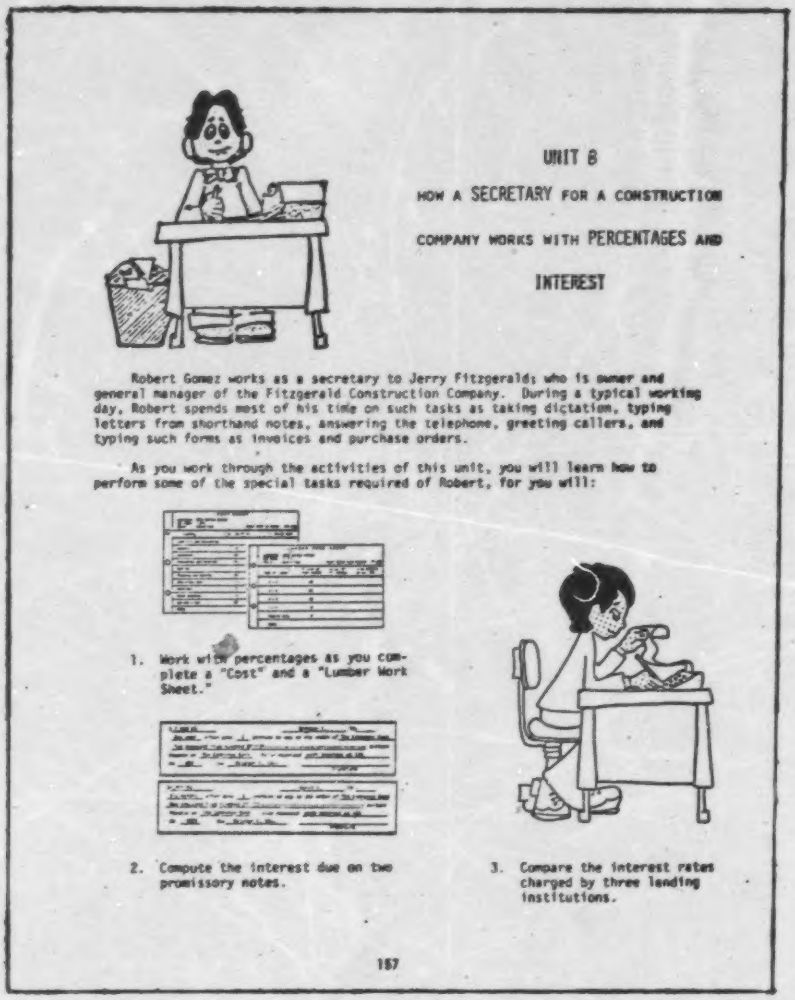
Currently, over 2 3/4 million secretaries are employed in the United States. Although most of them are women, male secretaries are found in many organizations.

The ambitious, well-trained secretary may advance to the position of office supervisor; and, with additional training and leadership ability, may move into other management positions.

UNIT 8

HOW A SECRETARY FOR A CONSTRUCTION COMPANY WORKS WITH PERCENTAGES AND INTEREST

Introductory Page to Student Activities:



UNIT 8

HOW A SECRETARY FOR A CONSTRUCTION COMPANY WORKS WITH PERCENTAGES AND INTEREST

Robert Gomez works as a secretary to Jerry Fitzgerald; who is owner and general manager of the Fitzgerald Construction Company. During a typical working day, Robert spends most of his time on such tasks as taking dictation, typing letters from shorthand notes, answering the telephone, greeting callers, and typing such forms as invoices and purchase orders.

As you work through the activities of this unit, you will learn how to perform some of the special tasks required of Robert, for you will:

1. Work with percentages as you complete a "Cost" and a "Lumber Work Sheet."
2. Compute the interest due on two promissory notes.
3. Compare the interest rates charged by three lending institutions.

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As you have your students discuss the information on this page, you may want to:

1. Call attention to the industry setting in which Robert Gomez works. It may interest your students to know that approximately 6% of the workers in this setting are engaged in office occupations.

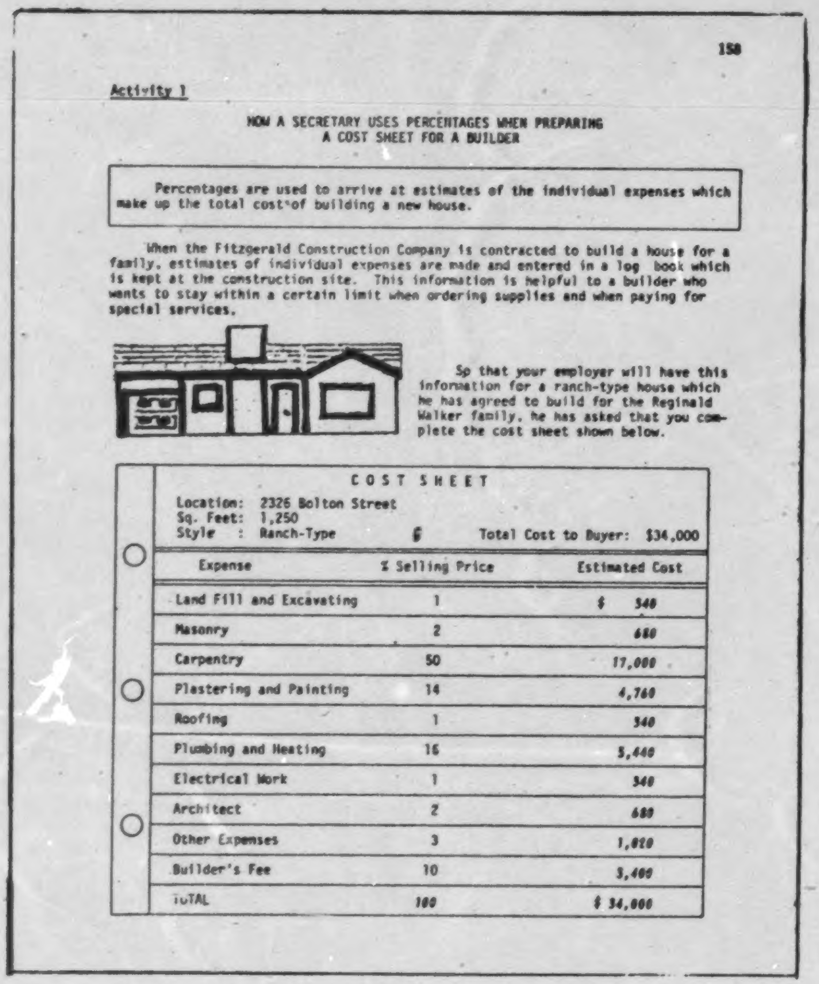
2. Discuss opportunities for male secretaries. An increasing number of young men are becoming interested in obtaining secretarial training because they realize that many secretaries advance to management positions.

3. Destroy the myth that secretaries only take dictation and type.

KEY - UNIT 8

HOW A SECRETARY USES PERCENTAGES WHEN PREPARING A COST SHEET FOR A BUILDER

Activity 1:



Activity 1

HOW A SECRETARY USES PERCENTAGES WHEN PREPARING A COST SHEET FOR A BUILDER

Percentages are used to arrive at estimates of the individual expenses which make up the total cost of building a new house.

When the Fitzgerald Construction Company is contracted to build a house for a family, estimates of individual expenses are made and entered in a log book which is kept at the construction site. This information is helpful to a builder who wants to stay within a certain limit when ordering supplies and when paying for special services.

So that your employer will have this information for a ranch-type house which he has agreed to build for the Reginald Walker family, he has asked that you complete the cost sheet shown below.

COST SHEET

Location: 2326 Bolton Street
Sq. Feet: 1,250
Style : Ranch-Type
Total Cost to Buyer: $34,000

Expense	% Selling Price	Estimated Cost
Land Fill and Excavating	1	$ 340
Masonry	2	680
Carpentry	50	17,000
Plastering and Painting	14	4,760
Roofing	1	340
Plumbing and Heating	16	5,440
Electrical Work	1	340
Architect	2	680
Other Expenses	3	1,020
Builder's Fee	10	3,400
TOTAL	100	$ 34,000

To stimulate a discussion on this activity, you may want to ask the following questions:

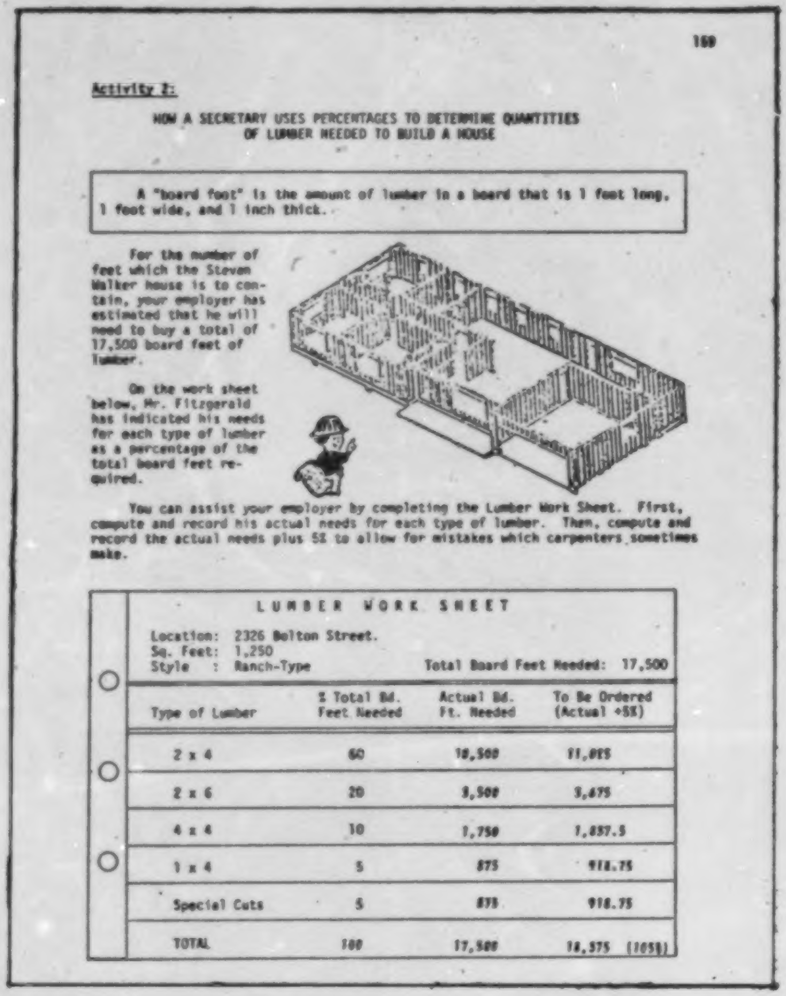
1. Why must the secretary complete cost sheets? *(When his secretary completes these sheets for him, Mr. Fitzgerald can devote his attention to the more important tasks of owning and managing a construction company.)*

2. How does a cost sheet help Mr. Fitzgerald stay within a certain limit when ordering supplies and when paying for special services? *(As he orders these supplies and pays for the special services, he can compare actual expenses with estimated expenses.)*

KEY - UNIT 8

HOW A SECRETARY USES PERCENTAGES TO DETERMINE QUANTITIES OF LUMBER NEEDED BY A BUILDER

Activity 2:



Activity 2:

HOW A SECRETARY USES PERCENTAGES TO DETERMINE QUANTITIES OF LUMBER NEEDED TO BUILD A HOUSE

A "board foot" is the amount of lumber in a board that is 1 foot long, 1 foot wide, and 1 inch thick.

For the number of feet which the Steven Walker house is to contain, your employer has estimated that he will need to buy a total of 17,500 board feet of lumber.

On the work sheet below, Mr. Fitzgerald has indicated his needs for each type of lumber as a percentage of the total board feet required.

You can assist your employer by completing the Lumber Work Sheet. First, compute and record his actual needs for each type of lumber. Then, compute and record the actual needs plus 5% to allow for mistakes which carpenters sometimes make.

LUMBER WORK SHEET

Location: 2326 Bolton Street.
Sq. Feet: 1,250
Style : Ranch-Type
Total Board Feet Needed: 17,500

Type of Lumber	% Total Bd. Feet Needed	Actual Bd. Ft. Needed	To Be Ordered (Actual +5%)
2 x 4	60	10,500	11,025
2 x 6	20	3,500	3,675
4 x 4	10	1,750	1,837.5
1 x 4	5	875	918.75
Special Cuts	5	875	918.75
TOTAL	100	17,500	18,375 (105%)

After checking answers with your students, you may want to ask them the following questions:

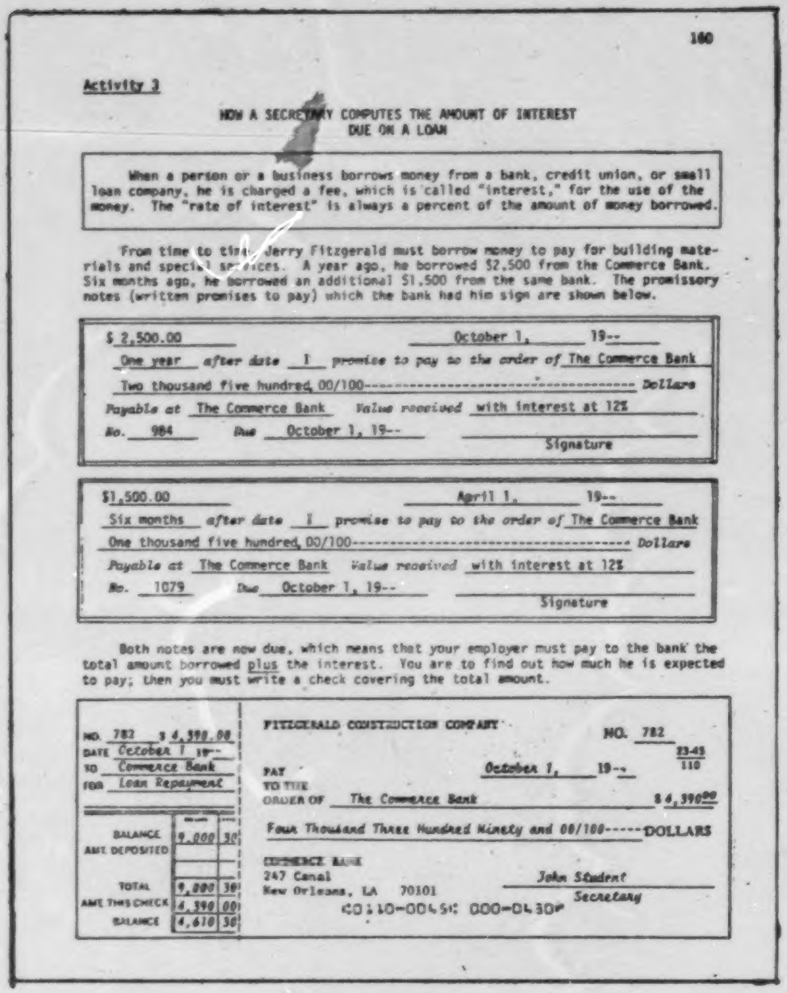
1. If you can check the accuracy of your total for Column 3 (actual board ft. needed) by comparing it with the "total board ft. needed," how can you check the accuracy of your total for Column 4 (to be ordered)? *(You can check the accuracy of the total for this column by seeing if it agrees with 105% of 17,500.)*

2. Why does a builder need correct information on a lumber work sheet? *(If the figures are not correct, a builder may order too much or too little of the lumber that is needed. Should he order too much, his profit will be affected. If he should order too little, prices may change or the lumber he needs may not be available at the time he places a new order.)*

KEY - UNIT 8

HOW A SECRETARY COMPUTES THE AMOUNT OF IN OF INTEREST DUE ON A LOAN

Activity 3:



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Activity 3

HOW A SECRETARY COMPUTES THE AMOUNT OF INTEREST DUE ON A LOAN

When a person or a business borrows money from a bank, credit union, or small loan company, he is charged a fee, which is called "interest," for the use of the money. The "rate of interest" is always a percent of the amount of money borrowed.

From time to time, Jerry Fitzgerald must borrow money to pay for building materials and special services. A year ago, he borrowed $2,500 from the Commerce Bank. Six months ago, he borrowed an additional $1,500 from the same bank. The promissory notes (written promises to pay) which the bank had him sign are shown below.

$ 2,500.00 October 1, 19--
One year after date I promise to pay to the order of The Commerce Bank
Two thousand five hundred 00/100-- Dollars
Payable at The Commerce Bank Value received with interest at 12%
No. 984 Due October 1, 19--
Signature

$1,500.00 April 1, 19--
Six months after date I promise to pay to the order of The Commerce Bank
One thousand five hundred 00/100-- Dollars
Payable at The Commerce Bank Value received with interest at 12%
No. 1079 Due October 1, 19--
Signature

Both notes are now due, which means that your employer must pay to the bank the total amount borrowed plus the interest. You are to find out how much he is expected to pay; then you must write a check covering the total amount.

NO. 782 $ 4,390.00
DATE October 1 19--
TO Commerce Bank
FOR Loan Repayment

BALANCE	9,000	30
AMT. DEPOSITED		
TOTAL	9,000	30
AMT. THIS CHECK	4,390	00
BALANCE	4,610	30

FITZGERALD CONSTRUCTION COMPANY
NO. 782
23-45
110
October 1, 19--
PAY TO THE ORDER OF The Commerce Bank $ 4,390.00
Four Thousand Three Hundred Ninety and 00/100-----DOLLARS
COMMERCE BANK
247 Canal
New Orleans, LA 70101
John Student
Secretary
C0110-0045C 000-0430

As you discuss the answers on this sheet, you may want to tell your students that unless otherwise stated, the rate of interest charged by a business is for a period of one year.

The amount for which the check should be written is determined as follows:

$2,500 (amount of first loan) x .12 (rate of interest) = $300 (amount of interest)
$2,500 (principal) + $300 (interest for 1 year) = $2,800 (amount due on first loan)

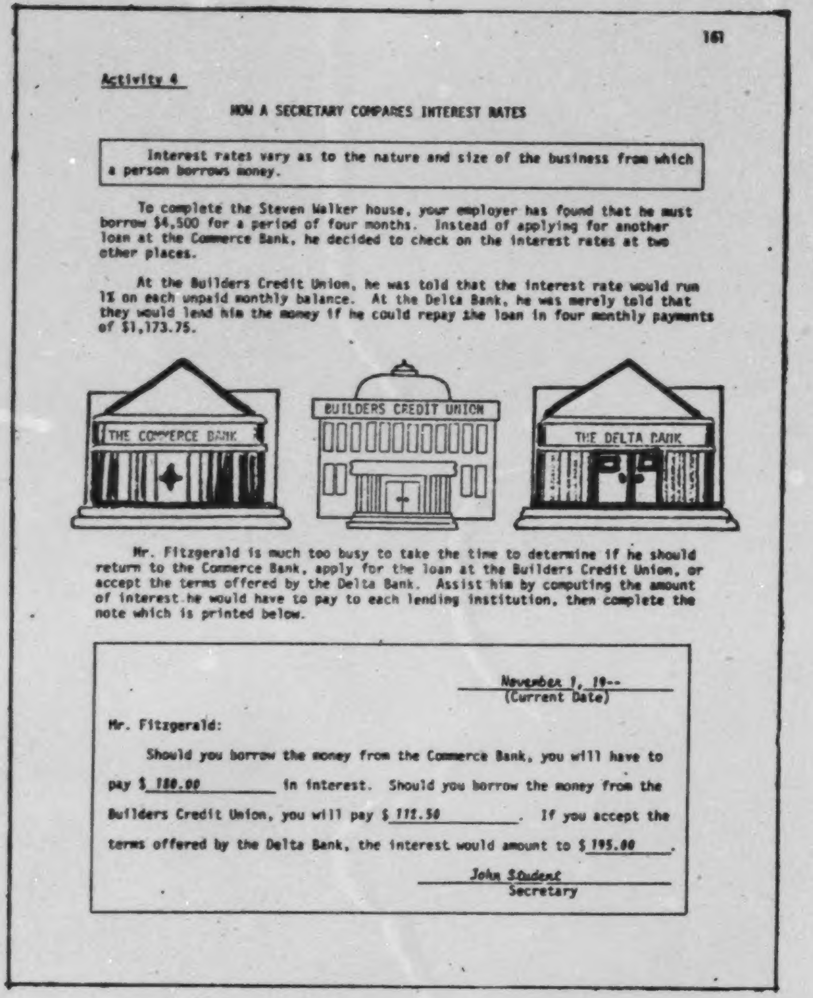
$1,500 (amount of second loan) x .12 (rate of interest) = $180 (amount of interest)
$ 180 (interest for 1 year) divided by 2 = $90 (interest for 6 months)
$1,500 (principal) + $90 (interest for 6 months) = $1,590 (amount due on 2nd loan)

$2,800 + $1,590 = $4,390 (amount of check)

KEY - UNIT 8

HOW A SECRETARY COMPARES INTEREST RATES

Activity 4:


THE COMMERCE BANK
BUILDERS CREDIT UNION
THE DELTA BANK

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Activity 4

HOW A SECRETARY COMPARES INTEREST RATES

Interest rates vary as to the nature and size of the business from which a person borrows money.

To complete the Steven Walker house, your employer has found that he must borrow $4,500 for a period of four months. Instead of applying for another loan at the Commerce Bank, he decided to check on the interest rates at two other places.

At the Builders Credit Union, he was told that the interest rate would run 1% on each unpaid monthly balance. At the Delta Bank, he was merely told that they would lend him the money if he could repay the loan in four monthly payments of $1,173.75.

Mr. Fitzgerald is much too busy to take the time to determine if he should return to the Commerce Bank, apply for the loan at the Builders Credit Union, or accept the terms offered by the Delta Bank. Assist him by computing the amount of interest he would have to pay to each lending institution, then complete the note which is printed below.

November 1, 19--
(Current Date)

Mr. Fitzgerald:

Should you borrow the money from the Commerce Bank, you will have to pay $ 180.00 in interest. Should you borrow the money from the Builders Credit Union, you will pay $ 112.50. If you accept the terms offered by the Delta Bank, the interest would amount to $ 195.00.

John Student
Secretary

The figures on the form letter in the lower section of this sheet are arrived at as follows:

$4,500 x .12 (rate of int. at Commerce Bank) = $540 (amt. of int. for 1 year)
$ 540 (interest for 1 year) divided by 3 = $180 (interest for four months)

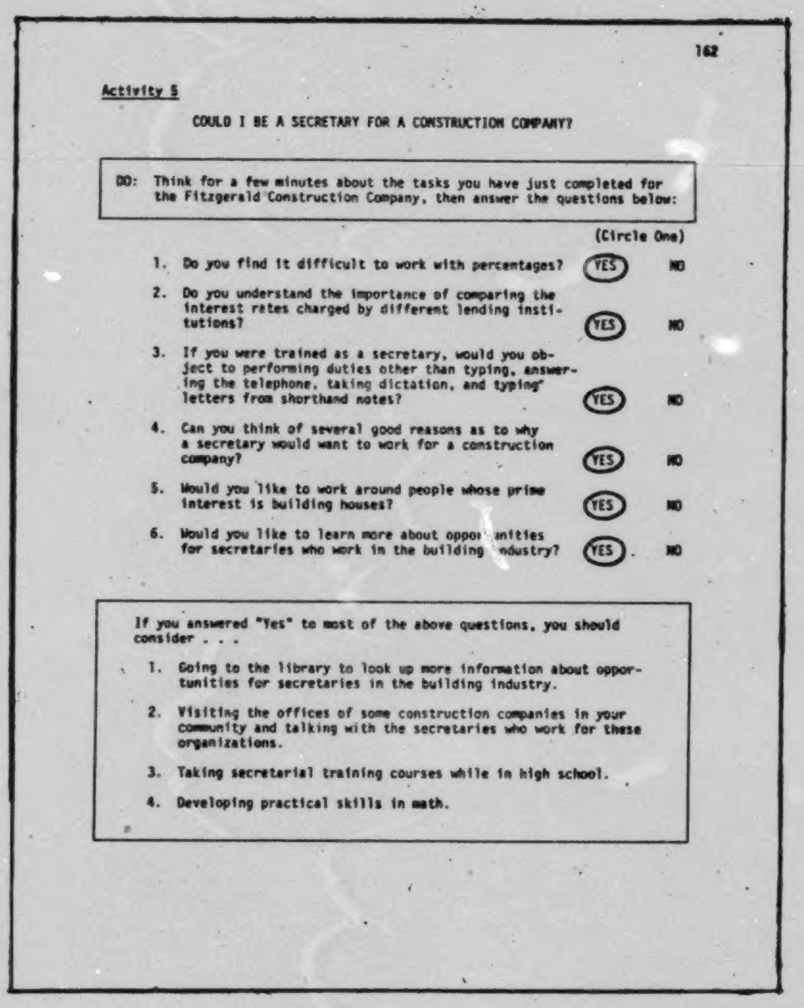
At the Builders Credit Union, Mr. Fitzgerald would have tc make four payments of $1,125 each on the principal amount of the loan. Therefore, his four unpaid monthly balances would be: $4,500, $3,375, $2,250, and $1,125. A 1% interest on these balances would amount to $45, $33,75, $22.50, and $11.25 respectively. The total amount of interest he would have to pay, in addition to the principal amount of the loan, would be $112.50.

Should Mr. Fitzgerald make four equal payments of $1,173.75 to the Delta Bank, he would pay a total of $4,695 to this institution. This figure less $4,500, the amount of the loan, = $195, which would be the amount of the interest payment.

KEY - UNIT 8

COULD I BE A SECRETARY FOR A CONSTRUCTION COMPANY

Activity 5:



Activity 5

COULD I BE A SECRETARY FOR A CONSTRUCTION COMPANY?

DO: Think for a few minutes about the tasks you have just completed for the Fitzgerald Construction Company, then answer the questions below:

(Circle One)

1. Do you find it difficult to work with percentages? [✓ YES] NO
2. Do you understand the importance of comparing the interest rates charged by different lending institutions? [✓ YES] NO
3. If you were trained as a secretary, would you object to performing duties other than typing, answering the telephone, taking dictation, and typing letters from shorthand notes? [✓ YES] NO
4. Can you think of several good reasons as to why a secretary would want to work for a construction company? [✓ YES] NO
5. Would you like to work around people whose prime interest is building houses? [✓ YES] NO
6. Would you like to learn more about opportunities for secretaries who work in the building industry? [✓ YES]. NO

If you answered "Yes" to most of the above questions, you should consider . . .

1. Going to the library to look up more information about opportunities for secretaries in the building industry.
2. Visiting the offices of some construction companies in your community and talking with the secretaries who work for these organizations.
3. Taking secretarial training courses while in high school.
4. Developing practical skills in math.

Encourage your students to orally react to the questions listed on the top section of this sheet.

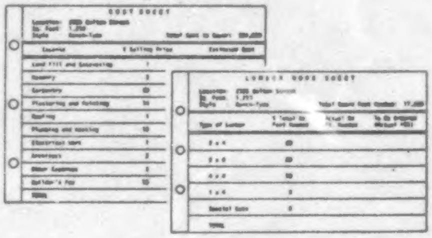
To stimulate further thought, you may ask them to think about Robert's motives for becoming a secretary and why he chose to work for a construction company. (Perhaps, Robert wanted to enter a field where there are multiple opportunities for advancing to management positions.)

UNIT 8

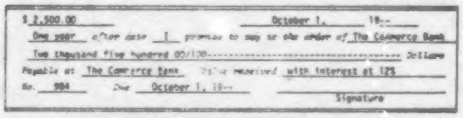
HOW A SECRETARY FOR A CONSTRUCTION COMPANY WORKS WITH PERCENTAGES AND INTEREST

Robert Gomez works as a secretary to Jerry Fitzgerald, who is owner and general manager of the Fitzgerald Construction Company. During a typical working day, Robert spends most of his time on such tasks as taking dictation, typing letters from shorthand notes, answering the telephone, greeting callers, and typing such forms as invoices and purchase orders.

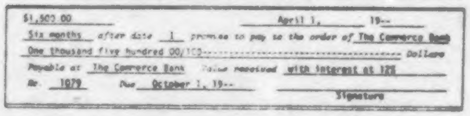
As you work through the activities of this unit, you will learn how to perform some of the special tasks required of Robert, for you will:



1. Work with percentages as you complete a "Cost" and a "Lumber Work Sheet."



$2,500.00 October 1, 19--
One year after date I promise to pay to the order of The Commerce Bank
Two thousand five hundred 00/100------------------------------------ Dollars
Payable at The Commerce Bank Value received with interest at 12%
No. 904 Due October 1, 19--
Signature



$1,500.00 April 1, 19--
Six months after date I promise to pay to the order of The Commerce Bank
One thousand five hundred 00/100------------------------------------ Dollars
Payable at The Commerce Bank Value received with interest at 12%
No. 1079 Due October 1, 19--
Signature

2. Compute the interest due on two promissory notes.

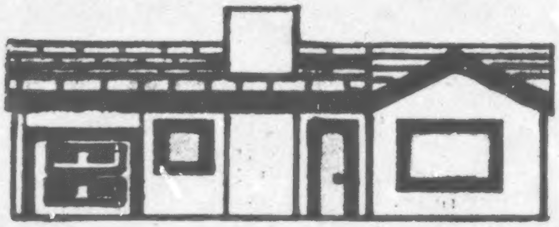
3. Compare the interest rates charged by three lending institutions.

Activity 1

HOW A SECRETARY USES PERCENTAGES WHEN PREPARING A COST SHEET FOR A BUILDER

Percentages are used to arrive at estimates of the individual expenses which make up the total cost of building a new house.

When the Fitzgerald Construction Company is contracted to build a house for a family, estimates of individual expenses are made and entered in a log book which is kept at the construction site. This information is helpful to a builder who wants to stay within a certain limit when ordering supplies and when paying for special services.



So that your employer will have this information for a ranch-type house which he has agreed to build for the Reginald Walker family, he has asked that you complete the cost sheet shown below.

COST SHEET

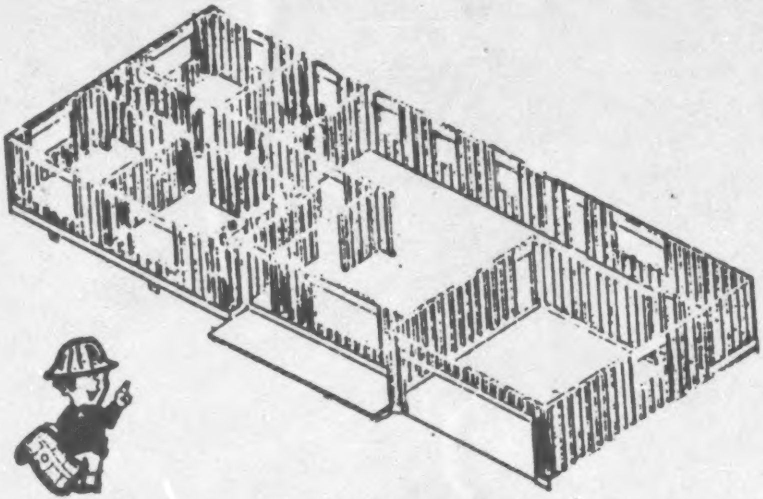
Location: 2326 Bolton Street
Sq. Feet: 1,250
Style : Ranch-Type
Total Cost to Buyer: $34,000

Expense	% Selling Price	Estimated Cost
Land Fill and Excavating	1	
Masonry	2	
Carpentry	50	
Plastering and Painting	14	
Roofing	1	
Plumbing and Heating	16	
Electrical Work	1	
Architect	2	
Other Expenses	3	
Builder's Fee	10	
TOTAL		

Activity 2:

HOW A SECRETARY USES PERCENTAGES TO DETERMINE QUANTITIES OF LUMBER NEEDED TO BUILD A HOUSE

A "board foot" is the amount of lumber in a board that is 1 foot long, 1 foot wide, and 1 inch thick.



For the number of feet which the Steven Walker house is to contain, your employer has estimated that he will need to buy a total of 17,500 board feet of lumber.

On the work sheet below, Mr. Fitzgerald has indicated his needs for each type of lumber as a percentage of the total board feet required.

You can assist your employer by completing the Lumber Work Sheet. First, compute and record his actual needs for each type of lumber. Then, compute and record the actual needs plus 5% to allow for mistakes which carpenters sometimes make.

LUMBER WORK SHEET

Location: 2326 Bolton Street
Sq. Feet: 1,250
Style : Ranch-Type
Total Board Feet Needed: 17,500

Type of Lumber	% Total Bd. Feet Needed	Actual Bd. Ft. Needed	To Be Ordered (Actual +5%)
2 x 4	60		
2 x 6	20		
4 x 4	10		
1 x 4	5		
Special Cuts	5		
TOTAL			

Activity 3

HOW A SECRETARY COMPUTES THE AMOUNT OF INTEREST DUE ON A LOAN

When a person or a business borrows money from a bank, credit union, or small loan company, he is charged a fee, which is called "interest," for the use of the money. The "rate of interest" is always a percent of the amount of money borrowed.

From time to time, Jerry Fitzgerald must borrow money to pay for building materials and special services. A year ago, he borrowed $2,500 from the Commerce Bank. Six months ago, he borrowed an additional $1,500 from the same bank. The promissory notes (written promises to pay) which the bank had him sign are shown below.

$ 2,500.00 October 1, 19--

One year *after date* I *promise to pay to the order of* The Commerce Bank

Two thousand five hundred 00/100------------------------------------ *Dollars*

Payable at The Commerce Bank *Value received* with interest at 12%

No. 984 *Due* October 1, 19--

Signature

$1,500.00 April 1, 19--

Six months *after date* I *promise to pay to the order of* The Commerce Bank

One thousand five hundred 00/100------------------------------------ *Dollars*

Payable at The Commerce Bank *Value received* with interest at 12%

No. 1079 *Due* October 1, 19--

Signature

Both notes are now due, which means that your employer must pay to the bank the total amount borrowed plus the interest. You are to find out how much he is expected to pay; then you must write a check covering the total amount.

NO. 782 $ ________

DATE ____________ 19 ___

TO ____________

FOR ____________

	DOLLARS	CENTS
BALANCE	9,000	30
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BALANCE		

FITZGERALD CONSTRUCTION COMPANY

NO. 782

23-45/110

________ ____ 19 ___

PAY TO THE ORDER OF ________________________ $ ______

________________________ DOLLARS

COMMERCE BANK
247 Canal
New Orleans, LA 70101

⑆0110⑈0045⑆ 000⑈0430⑈

Activity 4

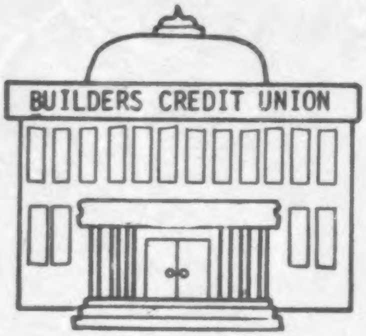
HOW A SECRETARY COMPARES INTEREST RATES

> Interest rates vary as to the nature and size of the business from which a person borrows money.

To complete the Steven Walker house, your employer has found that he must borrow $4,500 for a period of four months. Instead of applying for another loan at the Commerce Bank, he decided to check on the interest rates at two other places.

At the Builders Credit Union, he was told that the interest rate would run 1% on each unpaid monthly balance. At the Delta Bank, he was merely told that they would lend him the money if he could repay the loan in four monthly payments of $1,173.75.

THE COMMERCE BANK



THE DELTA BANK

Mr. Fitzgerald is much too busy to take the time to determine if he should return to the Commerce Bank, apply for the loan at the Builders Credit Union, or accept the terms offered by the Delta Bank. Assist him by computing the amount of interest he would have to pay to each lending institution, then complete the note which is printed below.

____
(Current Date)

Mr. Fitzgerald:

Should you borrow the money from the Commerce Bank, you will have to pay $____________ in interest. Should you borrow the money from the Builders Credit Union, you will pay $____________. If you accept the terms offered by the Delta Bank, the interest would amount to $__________.

____
Secretary

Activity 5

COULD I BE A SECRETARY FOR A CONSTRUCTION COMPANY?

DO: Think for a few minutes about the tasks you have just completed for the Fitzgerald Construction Company, then answer the questions below:

(Circle One)

1. Do you find it difficult to work with percentages? YES NO
2. Do you understand the importance of comparing the interest rates charged by different lending institutions? YES NO
3. If you were trained as a secretary, would you object to performing duties other than typing, answering the telephone, taking dictation, and typing letters from shorthand notes? YES NO
4. Can you think of several good reasons as to why a secretary would want to work for a construction company? YES NO
5. Would you like to work around people whose prime interest is building houses? YES NO
6. Would you like to learn more about opportunities for secretaries who work in the building industry? YES NO

If you answered "Yes" to most of the above questions, you should consider . . .

1. Going to the library to look up more information about opportunities for secretaries in the building industry.
2. Visiting the offices of some construction companies in your community and talking with the secretaries who work for these organizations.
3. Taking secretarial training courses while in high school.
4. Developing practical skills in math.

UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATION INDUSTRY USES THE METRIC SYSTEM

PURPOSE:

This unit introduces students to the job of ward clerk in a hospital, which represents a health occupation industry. The ward clerk computes metric measures and converts from one metric measure to another. Since the entire health industry is rapdily converting to metric measures, your students are not required to convert from the English (customary) system of measurement to the metric system in this unit.

MAJOR ACTIVITIES:

The student will make various computations and carry out various duties under the direction of registered nurses, licensed practical nurses, and physicians.

Before Class Begins:

1. Duplicate and assemble enough copies of the student simulation packet to provide each student with a set.
2. Read the general information about office and business jobs in the health occupations.
3. Consider talking with the school nurse about visiting the class and describing some of his/her duties. Be sure to have it clear that nurses and others in the health occupations field are increasingly divided between men and women. Don't let the stereotype of women as nurses and men as physicians be continued.

During Class:

1. Review your previous instruction on the metric system and scan Activity 1 carefully to determine whether it is needed for your students. You may want to use it as a review or skip directly to Activity 2.

2. Distribute the simulation packets; draw attention to drawings and discuss them briefly to provide a settin for the class.

3. Check all work and discuss items suggested on the Teacher's Key pages.

OPTIONAL ACTIVITIES:

1. Conduct a group interview (as described in the Appendix C) of the school nurse, or a hospital employee (who may be a parent, relative, or friend of one of the students).

2. Class game

   A. Prepare with a felt pen 4 X 6 cards as follows:

grams to kilograms	kilograms to grams	liters to milliliters
milliliters to liters	cm^3 to ml	ml to cm^3
cm^3 of water to grams of water	ml of water to grams of water	g to mg
mg to kg	kg to mg	liters of water to kilograms

   B. Distribute them to pairs of students; or distribute them to as many students as possible, planning to have them redistributed so that everyone has an opportunity to participate.

OPTIONAL ACTIVITIES (continued):

C. As a physician, ask for the following computations to be done in the head, on scratch paper, or at the blackboard. Have students with the appropriate card attempt to do the computation. Plan to give a point for each correct answer or for each answer corrected by some other student.

Questions:

1. How many grams are there in 2 kilograms? (2,000)
   Note: The answer is to be given by the student with card marked "kilograms to grams."
2. How many kilograms are there in 10,000 grams? (10)
   Note: The answer is to be given by the student with the card marked "grams to kilograms."
3. How many liters are there in 500 milliliters? (1/2)
   Note: The answer is to be given by the student with the card marked "milliliters to liters."
4. How many milliliters are there in 1.5 liters? (1,500)
   Note: The answer is to be given by the student with the card marked "liters to milliliters."
5. How many cm^3 are there in 100 ml? (100)
   Note: The answer is to be given by the student with the card marked "ml to cm^3."
6. How many ml are there in 135 cm^3? (135)
   Note: The answer is to be given by the student with the card marked "cm^3 to ml."
7. How much does 500 cm^3 of water weigh in grams? (500)
   Note: The answer is to be given by the student with the card marked "cm^3 of water to grams of water."
8. How much does 1,000 ml of water weigh in grams? (1,000)
   Note: The answer is to be given by the student with the card marked "ml of water to grams of water."
9. How many mg are there in 6 g? (6,000)
   Note: The answer is to be given by the student with the card marked "g to mg."
10. How many kg are there in 6,000,000 mg? (6)
    Note: The naswer is to be given by the student with the card marked "mg to kg."
11. How many mg are there in 2 kg? (2,000,000)
    Note: The answer is to be given by the student with the card marked "kg to mg."
12. How much does 10 liters of water weigh in kilograms (10)
    Note: The answer is to be given by the student with the card marked "liters of water to kilograms."

GENERAL INFORMATION ABOUT BUSINESS AND OFFICE JOBS IN THE HEALTH OCCUPATIONS FIELD

The health occupations (medical) fields include a great variety of occupations and professions such as dentists, doctors, medical technologists, lab workers, pharmacists, X-ray technicians, optometrists, dental hygienists, dieticians, hospital administrators, registered nurses, licensed practical nurses, vocational nurses, and hospital attendants.

In this brief review, we will look at some of the jobs that require business management or office backgrounds, which include::

1. *hospital or health care administrators*
2. *office workers in medical service such as ward clerks*

Hospital administrators are people who manage the entire operation of a hospital or health care facility such as a nursing facility. The work they do is very similar to that of other managers. See pages in other units for examples of descriptions. Some hospital administrators were formerly physicians and nurses, which means that these people must obtain their management training after they have gained basic hospital experience.

Ward clerks represent one kind of office worker who has entered medical service in a hospital or health care facility which includes obstetrics, pediatrics, and surgery. Ward clerks are usually assigned to one floor and work under the direction of doctors and nurses. They perform a great variety of duties such as:

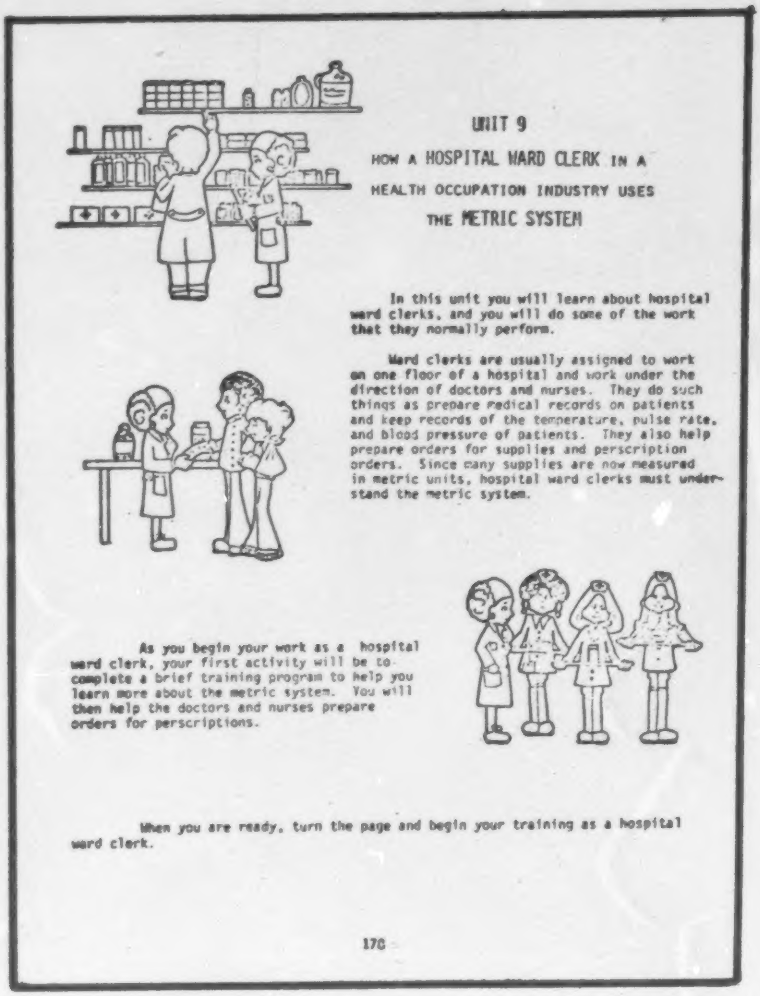
1. *prepare medical records on patients*
2. *copy temperature, pulse rate, and blood pressure on the records of patients*
3. *record diet instructions*
4. *prepare notice of patients' discharge from the facility*
5. *requisition supplies for the nursing staff*
6. *Answer telephone and relay messages*
7. *assist in dressing and feeding patients*

With additional education, ward clerks can progress in the medical field or in the hospital management field.

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATIONS INDUSTRY USES THE METRIC SYSTEM

Introductory Page of Student Packet:



UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATION INDUSTRY USES THE METRIC SYSTEM

In this unit you will learn about hospital ward clerks, and you will do some of the work that they normally perform.

Ward clerks are usually assigned to work on one floor of a hospital and work under the direction of doctors and nurses. They do such things as prepare medical records on patients and keep records of the temperature, pulse rate, and blood pressure of patients. They also help prepare orders for supplies and perscription orders. Since many supplies are now measured in metric units, hospital ward clerks must understand the metric system.

As you begin your work as a hospital ward clerk, your first activity will be to complete a brief training program to help you learn more about the metric system. You will then help the doctors and nurses prepare orders for perscriptions.

When you are ready, turn the page and begin your training as a hospital ward clerk.

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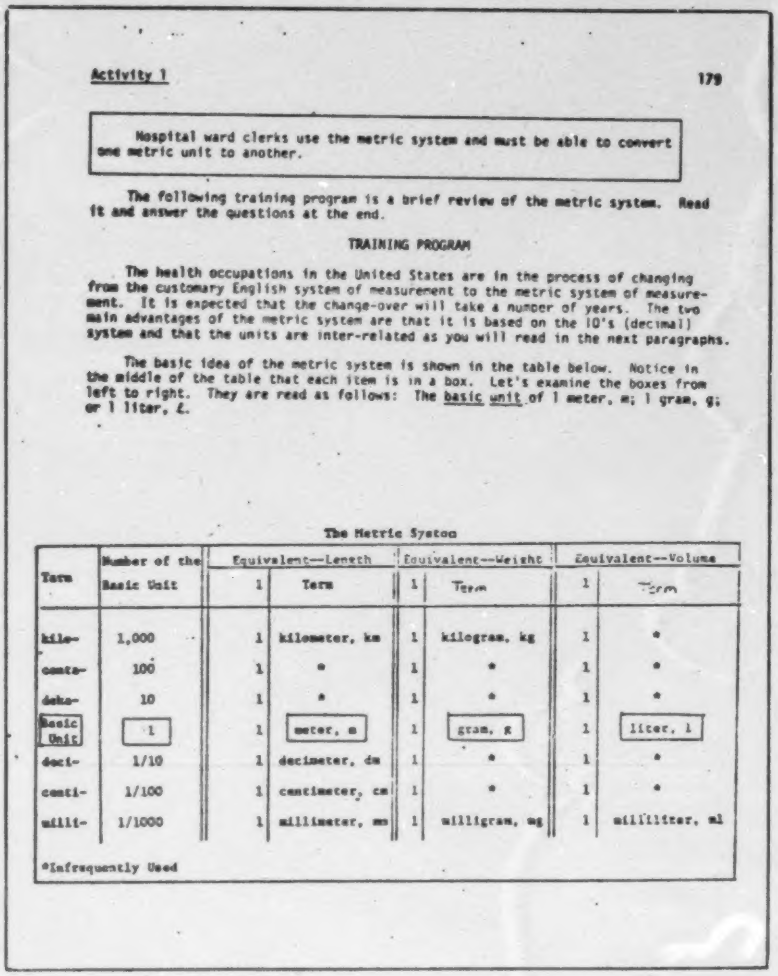
As you discuss the packet introductory page with students, supplement the discussion with information from page 167, "General Information About Business and Office Jobs in the Health Occupations Field."

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATIONS INDUSTRY USES THE METRIC SYSTEM

Activity 1:



Activity 1 179

Hospital ward clerks use the metric system and must be able to convert one metric unit to another.

The following training program is a brief review of the metric system. Read it and answer the questions at the end.

TRAINING PROGRAM

The health occupations in the United States are in the process of changing from the customary English system of measurement to the metric system of measurement. It is expected that the change-over will take a number of years. The two main advantages of the metric system are that it is based on the 10's (decimal) system and that the units are inter-related as you will read in the next paragraphs.

The basic idea of the metric system is shown in the table below. Notice in the middle of the table that each item is in a box. Let's examine the boxes from left to right. They are read as follows: The basic unit of 1 meter, m; 1 gram, g; or 1 liter, ℓ.

The Metric System

Term	Number of the Basic Unit	Equivalent--Length		Equivalent--Weight		Equivalent--Volume	
		1	Term	1	Term	1	Term
kilo-	1,000	1	kilometer, km	1	kilogram, kg	1	*
centa-	100	1	*	1	*	1	*
deka-	10	1	*	1	*	1	*
Basic Unit	1	1	meter, m	1	gram, g	1	liter, l
deci-	1/10	1	decimeter, dm	1	*	1	*
centi-	1/100	1	centimeter, cm	1	*	1	*
milli-	1/1000	1	millimeter, mm	1	milligram, mg	1	milliliter, ml

*Infrequently Used

Activity 1 is suggested as a summary or review of part of the instruction on the metric system. Normally, this activity may be skipped if the students already are conversant with it or it may be used as a review.

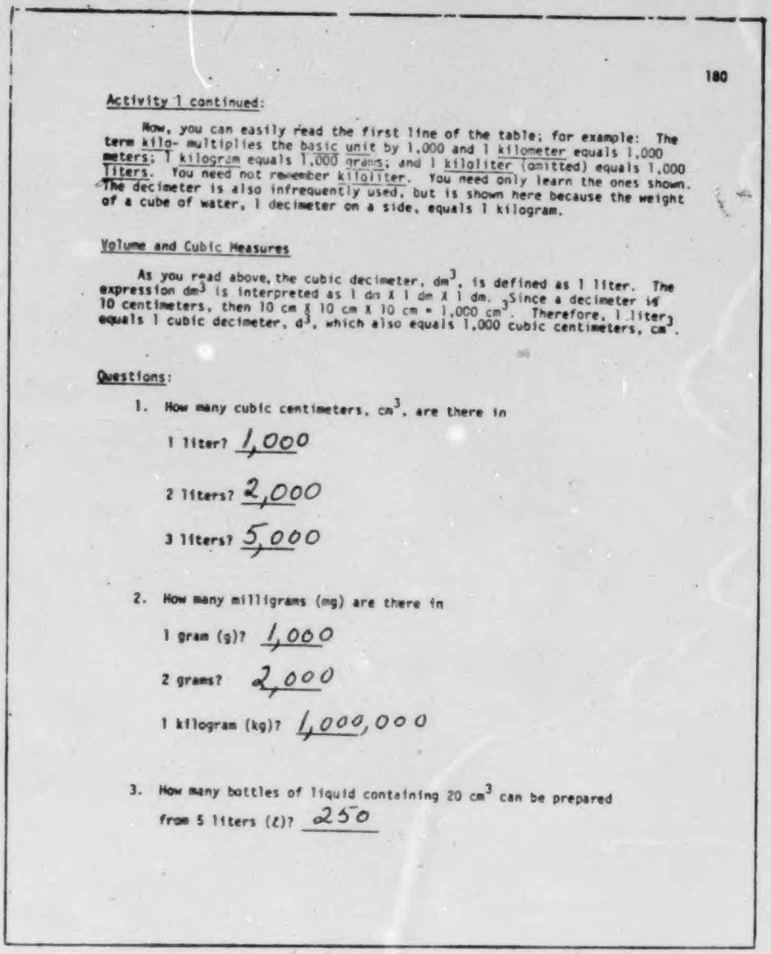
The following conversions within the metric system should be thoroughly reviewed:

How many cm^3 in 1 ℓ
How many g in 1 kg
How many mg in 1 g
How many mg in 1 kg
How are 1,000 cm^3, 1,000 ml, and 1 ℓ related ?

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATIONS INDUSTRY USES THE METRIC SYSTEM

Activity 1 (continued):



180

Activity 1 continued:

Now, you can easily read the first line of the table; for example: The term kilo- multiplies the basic unit by 1,000 and 1 kilometer equals 1,000 meters; 1 kilogram equals 1,000 grams; and 1 kiloliter (omitted) equals 1,000 liters. You need not remember kiloliter. You need only learn the ones shown. The decimeter is also infrequently used, but is shown here because the weight of a cube of water, 1 decimeter on a side, equals 1 kilogram.

Volume and Cubic Measures

As you read above, the cubic decimeter, dm^3, is defined as 1 liter. The expression dm^3 is interpreted as 1 dm X 1 dm X 1 dm. Since a decimeter is 10 centimeters, then 10 cm X 10 cm X 10 cm = 1,000 cm^3. Therefore, 1 liter equals 1 cubic decimeter, d^3, which also equals 1,000 cubic centimeters, cm^3.

Questions:

1. How many cubic centimeters, cm^3, are there in

   1 liter? 1,000

   2 liters? 2,000

   3 liters? 5,000

2. How many milligrams (mg) are there in

   1 gram (g)? 1,000

   2 grams? 2,000

   1 kilogram (kg)? 1,000,000

3. How many bottles of liquid containing 20 cm^3 can be prepared from 5 liters (ℓ)? 250

Note that only selected metric terms that will be commonly used in business and industry are a part of the problems.

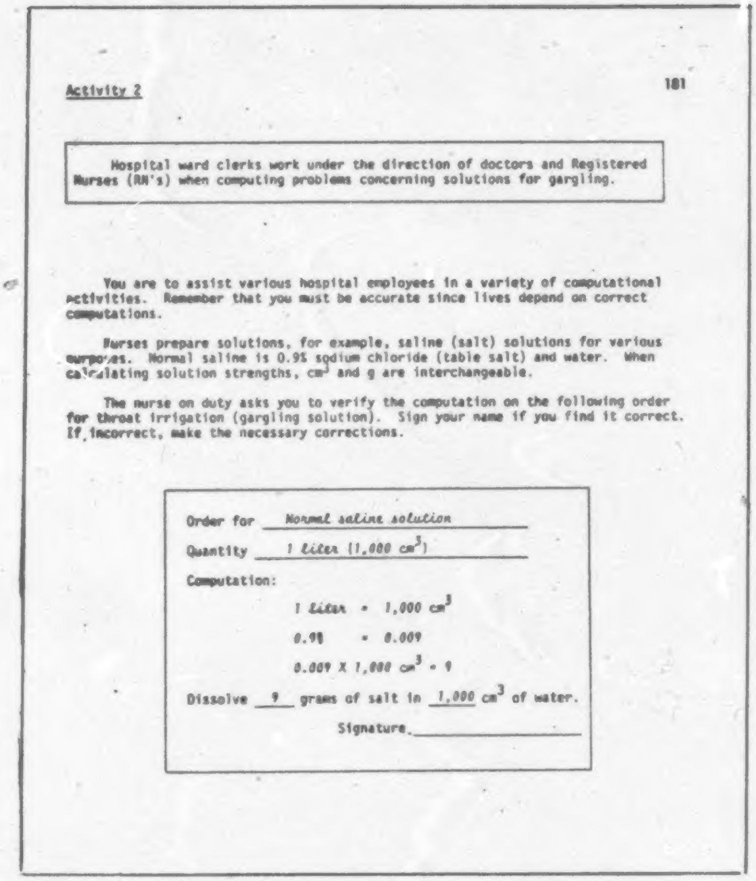
Answers to questions:

1. 1,000; 2,000; 5,000
2. 1,000; 2,000; 1,000,000
3. 1 ℓ = 1,000 cm^3; 5 X 1,000 = 5,000; 5,000 ÷ 20 cm^3 = 250 bottles

KEY - UNIT 9

HOW THE HOSPITAL WARD CLERK COMPUTES NORMAL SALINE SOLUTION

Activity 2:



Activity 2

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Hospital ward clerks work under the direction of doctors and Registered Nurses (RN's) when computing problems concerning solutions for gargling.

You are to assist various hospital employees in a variety of computational activities. Remember that you must be accurate since lives depend on correct computations.

Nurses prepare solutions, for example, saline (salt) solutions for various purposes. Normal saline is 0.9% sodium chloride (table salt) and water. When calculating solution strengths, cm^3 and g are interchangeable.

The nurse on duty asks you to verify the computation on the following order for throat irrigation (gargling solution). Sign your name if you find it correct. If incorrect, make the necessary corrections.

Order for *Normal saline solution*

Quantity *1 liter (1,000 cm^3)*

Computation:

1 liter = 1,000 cm^3

0.9% = 0.009

0.009 X 1,000 cm^3 = 9

Dissolve *9* grams of salt in *1,000* cm^3 of water.

Signature__________

Tell the students that normal saline solutions are actually salt solutions. Also, tell the students that 1 cm^3 of water weighs 1 gram.

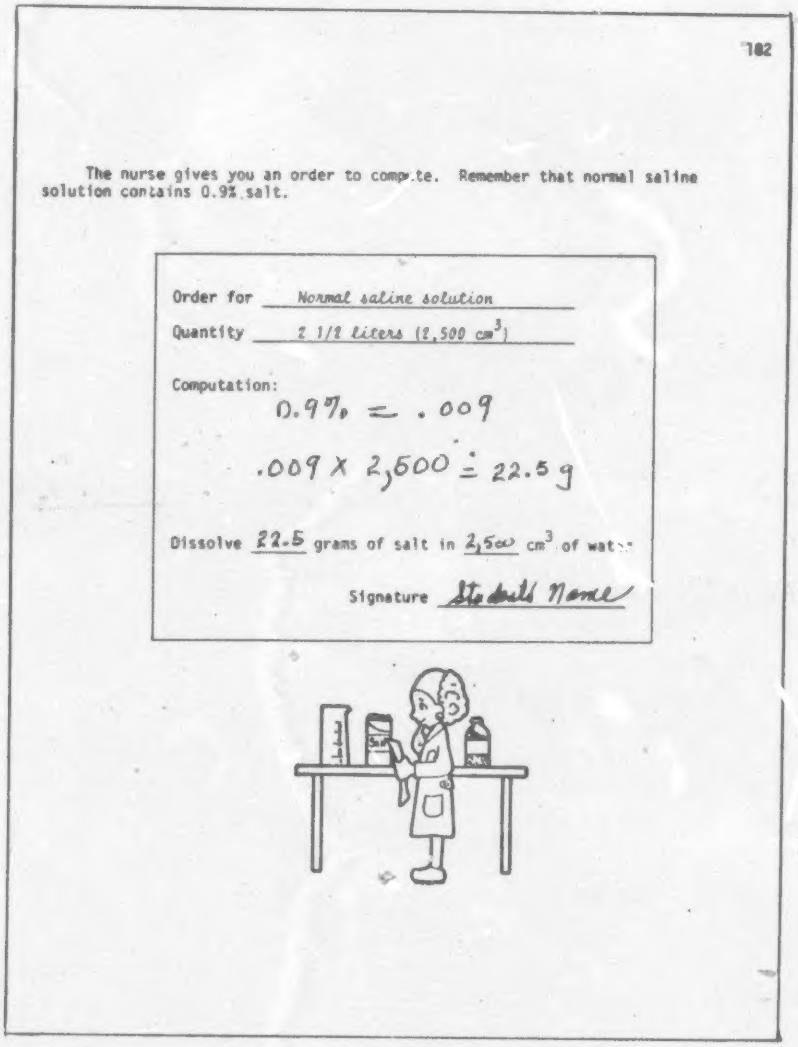
Review with the students how to convert 0.9% to a decimal.

For a rough idea of 9 grams, tell the students that one-third of a small candy bar weighs about 9 grams. In the hospital, the 9 grams would, of course, be carefully weighed out.

KEY - UNIT 9

HOW THE HOSPITAL WARD CLERK COMPUTES NORMAL SALINE SOLUTION

Activity 2 (continued):



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The nurse gives you an order to compute. Remember that normal saline solution contains 0.9% salt.

Order for *Normal saline solution*

Quantity *2 1/2 liters (2,500 cm^3)*

Computation:

$0.9\% = .009$

$.009 \times 2{,}500 \doteq 22.5\,g$

Dissolve *22.5* grams of salt in *2,500* cm^3 of water

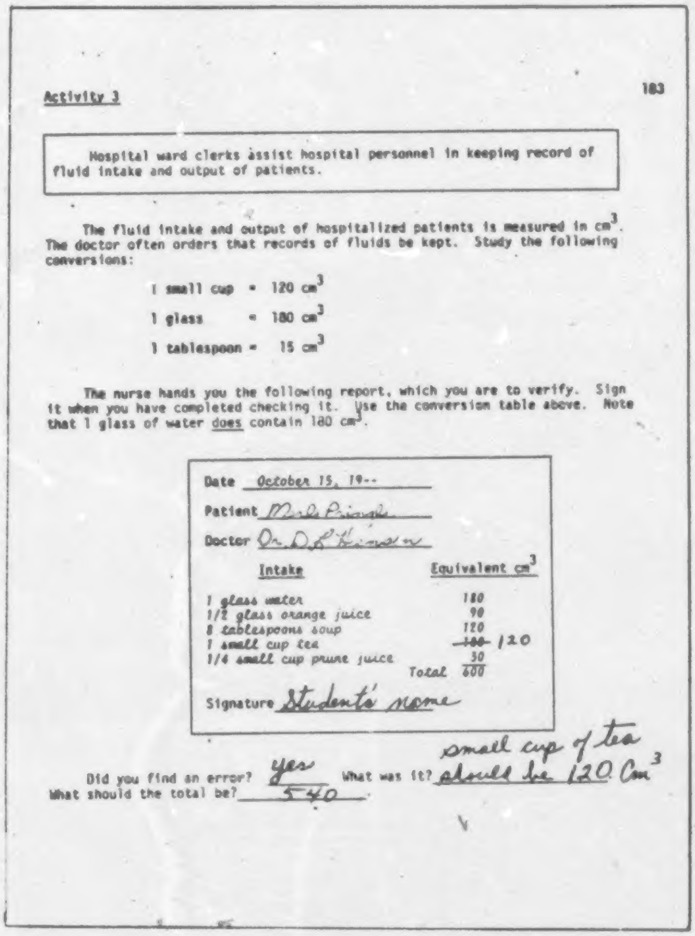
Signature *Students Name*

Remind students as hospital ward clerks, they are assisting in this work and someone such as a nurse would check and approve all their work.

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK KEEPS RECORDS OF THE FLUID INTAKE AND OUTPUT OF PATIENTS

Activity 3:



Activity 3 183

Hospital ward clerks assist hospital personnel in keeping record of fluid intake and output of patients.

The fluid intake and output of hospitalized patients is measured in cm^3. The doctor often orders that records of fluids be kept. Study the following conversions:

1 small cup = 120 cm^3
1 glass = 180 cm^3
1 tablespoon = 15 cm^3

The nurse hands you the following report, which you are to verify. Sign it when you have completed checking it. Use the conversion table above. Note that 1 glass of water does contain 180 cm^3.

Date *October 15, 19--*
Patient Mrs. Pringle
Doctor Dr. D. L. Hinson

Intake	Equivalent cm^3
1 glass water	180
1/2 glass orange juice	90
8 tablespoons soup	120
1 small cup tea	~~180~~ 120
1/4 small cup prune juice	30
Total	600

Signature Student's name

Did you find an error? yes What was it? small cup of tea should be 120 Cm^3
What should the total be? 540.

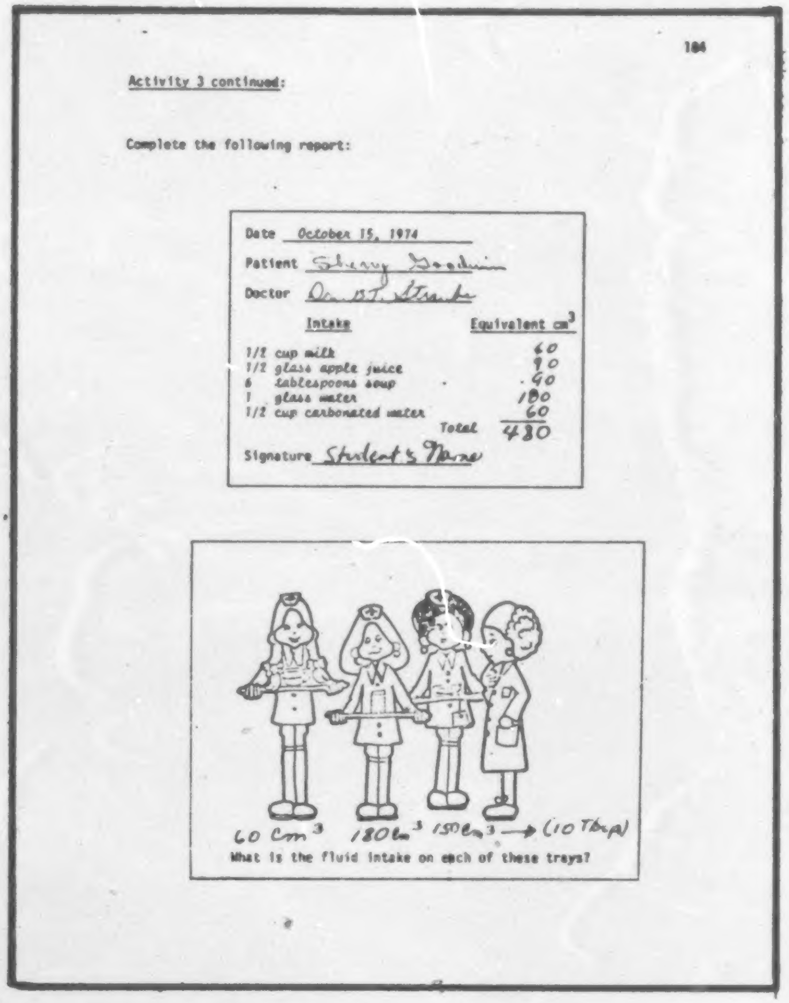
This activity actually involves only fluid intake.

Have the students notice that a serving of a cup is 120 cm^3, whereas a serving of a glass is 180 cm^3. Bowls of soup are measured by tablespoons of fluid placed in the bowl.

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK KEEPS RECORDS OF THE FLUID INTAKE AND OUTPUT OF PATIENTS

Activity 3(continued):



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Activity 3 continued:

Complete the following report:

Date October 15, 1974

Patient Sherry Goodwin

Doctor Dr. B.T. Strank

Intake	Equivalent cm^3
1/2 cup milk	60
1/2 glass apple juice	90
6 tablespoons soup	90
1 glass water	180
1/2 cup carbonated water	60
Total	480

Signature Student's Name

60 cm^3 180 cm^3 150 cm^3 → (10 Tbsp)

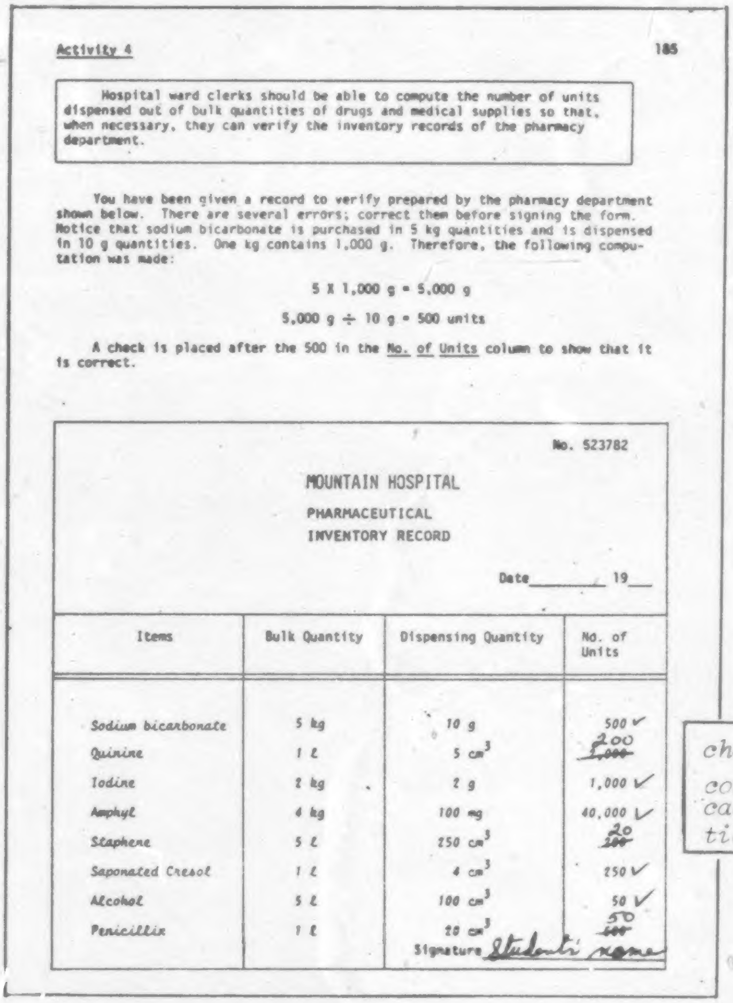
What is the fluid intake on each of these trays?

Tell the students that these records are very important to the doctor and must be absolutely accurate. The doctor, for example, must have a record of fluid intake and output in order to determine whether the patient is dehydrated (suffering from insufficient body liquids).

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK COMPUTES THE NUMBER OF UNITS TO BE DISPENSED

Activity 4:



Activity 4

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Hospital ward clerks should be able to compute the number of units dispensed out of bulk quantities of drugs and medical supplies so that, when necessary, they can verify the inventory records of the pharmacy department.

You have been given a record to verify prepared by the pharmacy department shown below. There are several errors; correct them before signing the form. Notice that sodium bicarbonate is purchased in 5 kg quantities and is dispensed in 10 g quantities. One kg contains 1,000 g. Therefore, the following computation was made:

$$5 \times 1{,}000\ \text{g} = 5{,}000\ \text{g}$$

$$5{,}000\ \text{g} \div 10\ \text{g} = 500\ \text{units}$$

A check is placed after the 500 in the No. of Units column to show that it is correct.

No. 523782

MOUNTAIN HOSPITAL

PHARMACEUTICAL
INVENTORY RECORD

Date________ 19___

Items	Bulk Quantity	Dispensing Quantity	No. of Units
Sodium bicarbonate	5 kg	10 g	500 ✓
Quinine	1 ℓ	5 cm^3	~~1,000~~ 200
Iodine	2 kg	2 g	1,000 ✓
Amphyl	4 kg	100 mg	40,000 ✓
Staphene	5 ℓ	250 cm^3	~~200~~ 20
Saponated Cresol	1 ℓ	4 cm^3	250 ✓
Alcohol	5 ℓ	100 cm^3	50 ✓
Penicillin	1 ℓ	20 cm^3	~~100~~ 50

Signature Students' name

checkmarks are used to show that the computations are correct. In the cases where errors were made, corrections are shown.

Notice that the conversions are entirely in the metric system. It is expected that the health occupations will completely convert to the metric system within a short time.

Students must be able to make the following conversions:

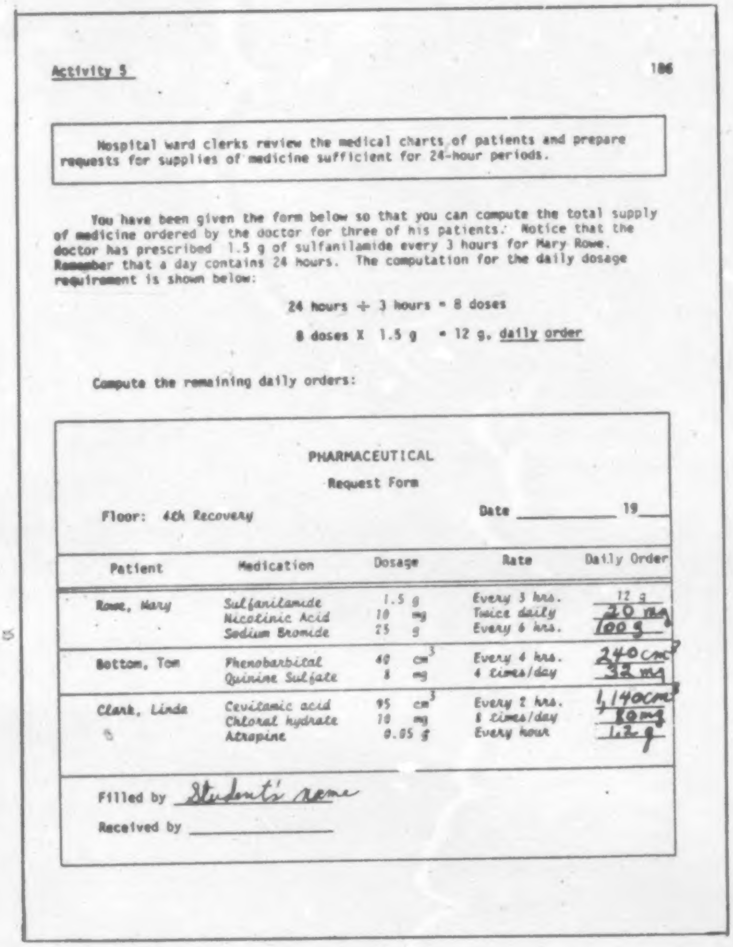
ℓ to cm^3
kg to g
g to mg
kg to mg

They need to understand that 1 ℓ of water weighs 1,000 g and 1 cm^3 of water weighs 1 g.

KEY - UNIT 9

HOW A HOSPITAL WARD CLERK COMPUTES QUANTITIES ON A REQUEST FORM

Activity 5:



Hospital ward clerks review the medical charts of patients and prepare requests for supplies of medicine sufficient for 24-hour periods.

You have been given the form below so that you can compute the total supply of medicine ordered by the doctor for three of his patients. Notice that the doctor has prescribed 1.5 g of sulfanilamide every 3 hours for Mary Rowe. Remember that a day contains 24 hours. The computation for the daily dosage requirement is shown below:

24 hours ÷ 3 hours = 8 doses

8 doses X 1.5 g = 12 g, daily order

Compute the remaining daily orders:

PHARMACEUTICAL

Request Form

Floor: *4th Recovery*

Date ____________ 19___

Patient	Medication	Dosage	Rate	Daily Order
Rowe, Mary	*Sulfanilamide*	1.5 g	Every 3 hrs.	12 g
	Nicotinic Acid	10 mg	Twice daily	20 mg
	Sodium Bromide	25 g	Every 6 hrs.	100 g
Bottom, Tom	*Phenobarbital*	40 cm^3	Every 4 hrs.	240 cm^3
	Quinine Sulfate	8 mg	4 times/day	32 mg
Clark, Linda	*Cevitamic acid*	95 cm^3	Every 2 hrs.	1,140 cm^3
	Chloral hydrate	10 mg	8 times/day	80 mg
	Atropine	0.05 g	Every hour	1.2 g

Filled by *Student's name*

Received by ______________

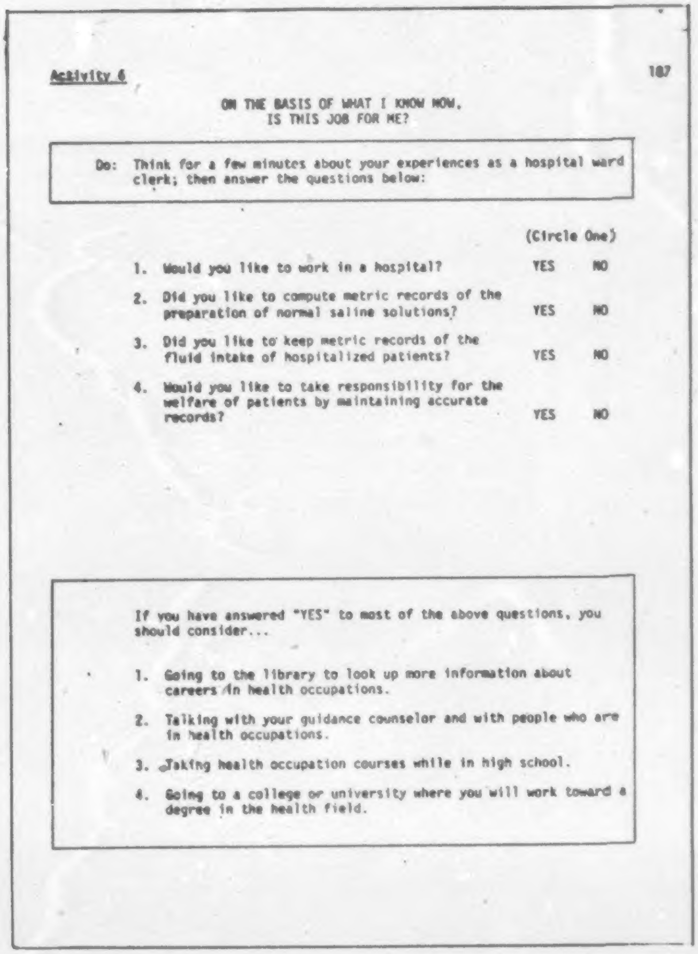
Have the students note that they are to prepare a request form to obtain drugs from the pharmaceutical department. Basically, two steps are involved:

1. Determine the number of doses in a 24-hour period
2. Compute the total daily order

KEY - UNIT 9

AT THIS POINT IN TIME, IS THIS JOB FOR ME?

Activity 6:



Activity 6

187

ON THE BASIS OF WHAT I KNOW NOW,
IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as a hospital ward clerk; then answer the questions below:

	(Circle One)	
1. Would you like to work in a hospital?	YES	NO
2. Did you like to compute metric records of the preparation of normal saline solutions?	YES	NO
3. Did you like to keep metric records of the fluid intake of hospitalized patients?	YES	NO
4. Would you like to take responsibility for the welfare of patients by maintaining accurate records?	YES	NO

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in health occupations.
2. Talking with your guidance counselor and with people who are in health occupations.
3. Taking health occupation courses while in high school.
4. Going to a college or university where you will work toward a degree in the health field.

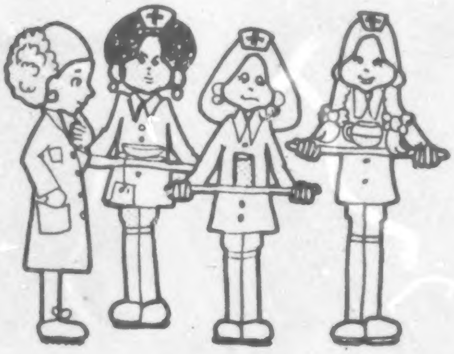
Answers will vary considerably. Be sure that the students understand that health occupations are open to both men and women. Both men and women provide nursing services of various kinds in modern hospitals.

UNIT 9

HOW A HOSPITAL WARD CLERK IN A HEALTH OCCUPATION INDUSTRY USES THE METRIC SYSTEM

In this unit you will learn about hospital ward clerks, and you will do some of the work that they normally perform.

Ward clerks are usually assigned to work on one floor of a hospital and work under the direction of doctors and nurses. They do such things as prepare medical records on patients and keep records of the temperature, pulse rate, and blood pressure of patients. They also help prepare orders for supplies and perscription orders. Since many supplies are now measured in metric units, hospital ward clerks must understand the metric system.



As you begin your work as a hospital ward clerk, your first activity will be to complete a brief training program to help you learn more about the metric system. You will then help the doctors and nurses prepare orders for perscriptions.

When you are ready, turn the page and begin your training as a hospital ward clerk.

Hospital ward clerks use the metric system and must be able to convert one metric unit to another.

The following training program is a brief review of the metric system. Read it and answer the questions at the end.

TRAINING PROGRAM

The health occupations in the United States are in the process of changing from the customary English system of measurement to the metric system of measurement. It is expected that the change-over will take a number of years. The two main advantages of the metric system are that it is based on the 10's (decimal) system and that the units are inter-related as you will read in the next paragraphs.

The basic idea of the metric system is shown in the table below. Notice in the middle of the table that each item is in a box. Let's examine the boxes from left to right. They are read as follows: The basic unit of 1 meter, m; 1 gram, g; or 1 liter, ℓ.

The Metric System

Term	Number of the Basic Unit	Equivalent--Length		Equivalent--Weight		Equivalent--Volume	
		1	Term	1	Term	1	Term
kilo-	1,000	1	kilometer, km	1	kilogram, kg	1	*
centa-	100	1	*	1	*	1	*
deka-	10	1	*	1	*	1	*
Basic Unit	1	1	meter, m	1	gram, g	1	liter, l
deci-	1/10	1	decimeter, dm	1	*	1	*
centi-	1/100	1	centimeter, cm	1	*	1	*
milli-	1/1000	1	millimeter, mm	1	milligram, mg	1	milliliter, ml

*Infrequently Used

Activity 1 continued:

Now, you can easily read the first line of the table; for example: The term kilo- multiplies the basic unit by 1,000 and 1 kilometer equals 1,000 meters; 1 kilogram equals 1,000 grams; and 1 kiloliter (omitted) equals 1,000 liters. You need not remember kiloliter. You need only learn the ones shown. The decimeter is also infrequently used, but is shown here because the weight of a cube of water, 1 decimeter on a side, equals 1 kilogram.

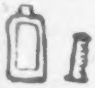
Volume and Cubic Measures

As you read above, the cubic decimeter, dm^3, is defined as 1 liter. The expression dm^3 is interpreted as 1 dm X 1 dm X 1 dm. Since a decimeter is 10 centimeters, then 10 cm X 10 cm X 10 cm = 1,000 cm^3. Therefore, 1 liter equals 1 cubic decimeter, d^3, which also equals 1,000 cubic centimeters, cm^3.

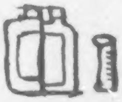
Questions:

1. How many cubic centimeters, cm^3, are there in

1 liter? ________



2 liters? ________

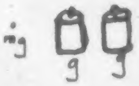


3 liters? ________

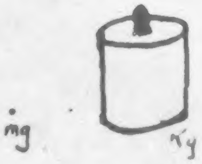
2. How many milligrams (mg) are there in

1 gram (g)? ________

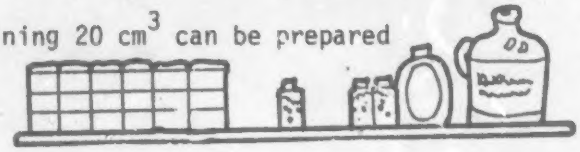
2 grams? ________



1 kilogram (kg)? ________



3. How many bottles of liquid containing 20 cm^3 can be prepared from 5 liters (ℓ)? __________



Activity 2

Hospital ward clerks work under the direction of doctors and Registered Nurses (RN's) when computing problems concerning solutions for gargling.

You are to assist various hospital employees in a variety of computational activities. Remember that you must be accurate since lives depend on correct computations.

Nurses prepare solutions, for example, saline (salt) solutions, for various purposes. Normal saline is 0.9% sodium chloride (table salt) and water. When calculating solution strengths, cm^3 and g are interchangeable.

The nurse on duty asks you to verify the computation on the following order for throat irrigation (gargling solution). Sign your name if you find it correct. If incorrect, make the necessary corrections.

Order for *Normal saline solution*

Quantity *1 liter (1,000 cm^3)*

Computation:

$1 \text{ liter} = 1{,}000 \text{ cm}^3$

$0.9\% = 0.009$

$0.009 \times 1{,}000 \text{ cm}^3 = 9$

Dissolve *9* grams of salt in *1,000* cm^3 of water.

Signature ____________________

Activity 2 continued:

The nurse gives you an order to compute. Remember that normal saline solution contains 0.9% salt.

Order for *Normal saline solution*

Quantity *2 1/2 liters (2,500 cm^3)*

Computation:

Dissolve _____ grams of salt in _____ cm^3 of water

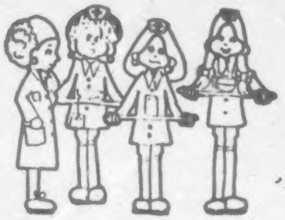
Signature ____________________

Activity 3

Hospital ward clerks assist hospital personnel in keeping record of fluid intake and output of patients.

The fluid intake and output of hospitalized patients is measured in cm^3. The doctor often orders that records of fluids be kept. Study the following conversions:

1 small cup = 120 cm^3
1 glass = 180 cm^3
1 tablespoon = 15 cm^3



The nurse hands you the following report, which you are to verify. Sign it when you have completed checking it. Use the conversion table above. Note that 1 glass of water does contain 180 cm^3.

Date *October 15, 19--*
Patient Merle Pringle
Doctor Dr. D.L. Henson

Intake	Equivalent cm^3
1 glass water	*180*
1/2 glass orange juice	*90*
8 tablespoons soup	*120*
1 small cup tea	*180*
1/4 small cup prune juice	*30*
Total	*600*

Signature ____________________

Did you find an error? ________ What was it? ______________________. What should the total be? ________________.

Activity 3 continued:

Complete the following report:

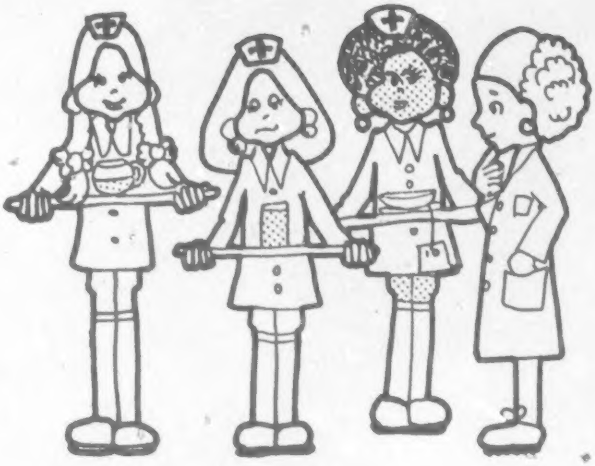
Date *October 15, 1974*

Patient Sherry Goodwin

Doctor Dr. B.T. Straube

Intake	Equivalent cm^3
1/2 cup milk	
1/2 glass apple juice	
6 tablespoons soup	
1 glass water	
1/2 cup carbonated water	
Total	______

Signature____________________



What is the fluid intake on each of these trays?

Activity 4

Hospital ward clerks should be able to compute the number of units dispensed out of bulk quantities of drugs and medical supplies so that, when necessary, they can verify the inventory records of the pharmacy department.

You have been given a record to verify prepared by the pharmacy department shown below. There are several errors; correct them before signing the form. Notice that sodium bicarbonate is purchased in 5 kg quantities and is dispensed in 10 g quantities. One kg contains 1,000 g. Therefore, the following computation was made:

$$5 \times 1{,}000 \text{ g} = 5{,}000 \text{ g}$$

$$5{,}000 \text{ g} \div 10 \text{ g} = 500 \text{ units}$$

A check is placed after the 500 in the No. of Units column to show that it is correct.

No. 523782

MOUNTAIN HOSPITAL

PHARMACEUTICAL
INVENTORY RECORD

Date__________ 19___

Items	Bulk Quantity	Dispensing Quantity	No. of Units
Sodium bicarbonate	*5 kg*	*10 g*	*500* ✓
Quinine	*1 ℓ*	*5* cm^3	*2,000*
Iodine	*2 kg*	*2 g*	*1,000*
Amphyl	*4 kg*	*100 mg*	*40,000*
Staphene	*5 ℓ*	*250* cm^3	*200*
Saponcted Cresol	*1 ℓ*	*4* cm^3	*250*
Alcohol	*5 ℓ*	*100* cm^3	*50*
Penicillin	*1 ℓ*	*20* cm^3	*500*

Signature______________________

Hospital ward clerks review the medical charts of patients and prepare requests for supplies of medicine sufficient for 24-hour periods.

You have been given the form below so that you can compute the total supply of medicine ordered by the doctor for three of his patients. Notice that the doctor has prescribed 1.5 g of sulfanilamide every 3 hours for Mary Rowe. Remember that a day contains 24 hours. The computation for the daily dosage requirement is shown below:

24 hours ÷ 3 hours = 8 doses

8 doses X 1.5 g = 12 g, daily order

Compute the remaining daily orders:

PHARMACEUTICAL

Request Form

Floor: *4th Recovery* Date ____________ 19____

Patient	Medication	Dosage	Rate	Daily Order
Rowe, Mary	*Sulfanilamide*	1.5 g	*Every 3 hrs.*	12 g
	Nicotinic Acid	10 mg	*Twice daily*	______
	Sodium Bromide	25 g	*Every 6 hrs.*	______
Bottom, Tom	*Phenobarbital*	40 cm^3	*Every 4 hrs.*	______
	Quinine Sulfate	8 mg	*4 times/day*	______
Clark, Linda	*Cevitamic acid*	95 cm^3	*Every 2 hrs.*	______
	Chloral hydrate	10 mg	*8 times/day*	______
	Atropine	0.05 g	*Every hour*	______

Filled by ________________

Received by ________________

Activity 6

ON THE BASIS OF WHAT I KNOW NOW, IS THIS JOB FOR ME?

Do: Think for a few minutes about your experiences as a hospital ward clerk; then answer the questions below:

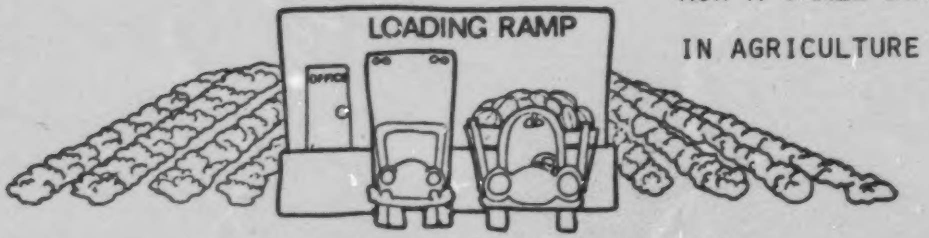
	(Circle One)	
1. Would you like to work in a hospital?	YES	NO
2. Did you like to compute metric records of the preparation of normal saline solutions?	YES	NO
3. Did you like to keep metric records of the fluid intake of hospitalized patients?	YES	NO
4. Would you like to take responsibility for the welfare of patients by maintaining accurate records?	YES	NO

If you have answered "YES" to most of the above questions, you should consider...

1. Going to the library to look up more information about careers in health occupations.
2. Talking with your guidance counselor and with people who are in health occupations.
3. Taking health occupation courses while in high school.
4. Going to a college or university where you will work toward a degree in the health field.

UNIT 10

HOW A SMALL BUSINESS OWNER IN AGRICULTURE USES GEOMETRY



PURPOSE:

This unit introduces students to the job of a truck farmer (small business owner) and gives them the opportunity to practice their skills in geometry (perimeter, area, and volume).

MAJOR ACTIVITIES:

While working through the activities of this unit, students will:

1. Compute the perimeter of the fields of a farm to determine fencing costs.
2. Figure the volume of water needed to irrigate a field and arrive at a cost estimate.
3. Compute the area of a given section of land in arriving at an estimate of income.

Before Class Begins:

1. Thoroughly acquaint yourself with the student materials (the white sheets at the end of the unit) and determine their applicability to your class.
2. Familiarize yourself with the design of the teacher keys.
3. Duplicate and assemble enough of the student materials for each class member.
4. Read the general information sheet on the truck farmer.
5. Review the optional activities.

During Class:

1. Distribute the simulation packet.
2. With the students, read and discuss the introductory page 190.
3. Ask the students to complete the activities on pages 198 through 202. While they are busy with their tasks, you may wish to read through all of the information on the keys, pages 191 through 196 .
4. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the keys to each of the activities.

OPTIONAL ACTIVITIES:

1. GEOMETRY

   Have the students repeat any or all of the three problems in the unit for the classroom, gym, or school yard.

2. STUDENT RESEARCH

   Students that have shown an interest in agriculture as a career can report on the preparation they need.

3. GUEST SPEAKER

   Invite a farmer or someone who holds a related job to speak to your class on how geometry is used in daily business activities. If a parent works for a farm or farm related business, consider asking this person to be the first speaker. *For an interesting and effective variation of this activity, please refer to the information in Appendix C, "Guidelines for Conducting Interviews" and "Sample Interview Guide."*

GENERAL INFORMATION ON A SMALL BUSINESS OWNER-MANAGER

The truck farmer in this unit is one example of the ever increasing number of individuals that own small businesses.

This background material largely concerns the owner-manager. The owner of a business is the person who is legally responsible and who actually owns it. The manager, employed by the owner, is the person who operates the business for the owner by hiring and discharging people, buying supplies, taking in the cash, handling the bank account, and so on. In many businesses the owner and the manager are the same person. Let's examine the dual function.

How Do Owner-Managers Get Started?

First, they select a business operation with which they are familiar and experienced. They investigate the likelihood of competition and they choose a location. Then, they raise some money to get started by investing their own cash and often borrowing additional money. They buy or rent land, and a building. If they plan to operate a service business, such as the dry-cleaning business, they purchase supplies and equipment. If they sell goods, they purchase an inventory.

Furthermore, all business owner-managers must advertise, hire employees, open bank accounts, and plan for a great variety of activities. Often, they have to obtain a license to operate and must always meet local, state, and federal ordinances and laws. Of prime importance is to set up an office to handle purchases, sales, collections, and reports.

A person who is successful in owning and operating a business often has the following characteristics:

1. *Willingness to work hard*
2. *Ability to face discouragement*
3. *Ability to make friends with customers*
4. *Ability to motivate employees to do a good job*

Other factors more related to the actual business include:

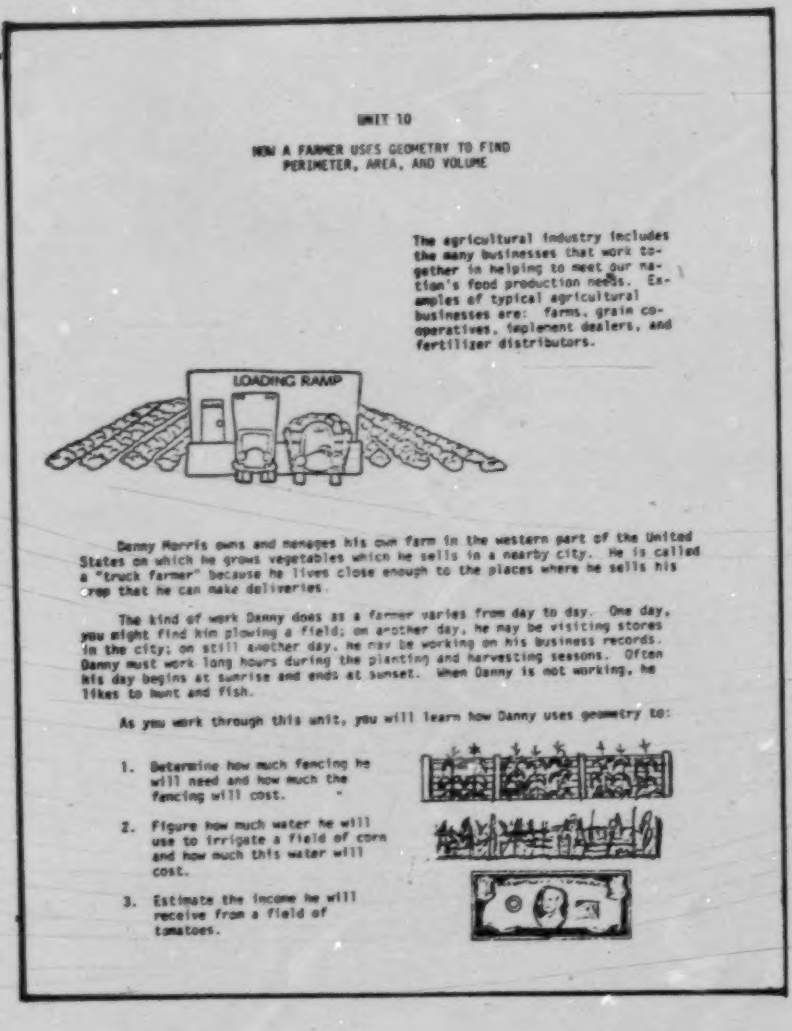
1. *Ability to raise capital (money)*
2. *Successful experience in working in other similar businesses*
3. *Mental ability to juggle a number of activities at one time*
4. *Physical capacity to hold up under pressure*

The above background only describes part of the work that an owner-manager does and the splendid opportunities open to persons who enjoy that work, which may also lead to owning and managing large stores and industries.

KEY - UNIT 10

HOW A FARMER USES GEOMETRY TO FIND PERIMETER, VOLUME, AND AREA

Introductory Page of Student Packet:



UNIT 10

HOW A FARMER USES GEOMETRY TO FIND
PERIMETER, AREA, AND VOLUME

The agricultural industry includes the many businesses that work together in helping to meet our nation's food production needs. Examples of typical agricultural businesses are: farms, grain cooperatives, implement dealers, and fertilizer distributors.

Danny Morris owns and manages his own farm in the western part of the United States on which he grows vegetables which he sells in a nearby city. He is called a "truck farmer" because he lives close enough to the places where he sells his crop that he can make deliveries.

The kind of work Danny does as a farmer varies from day to day. One day, you might find him plowing a field; on another day, he may be visiting stores in the city; on still another day, he may be working on his business records. Danny must work long hours during the planting and harvesting seasons. Often his day begins at sunrise and ends at sunset. When Danny is not working, he likes to hunt and fish.

As you work through this unit, you will learn how Danny uses geometry to:

1. Determine how much fencing he will need and how much the fencing will cost.
2. Figure how much water he will use to irrigate a field of corn and how much this water will cost.
3. Estimate the income he will receive from a field of tomatoes.

The Industry

The Job

The Students' Work

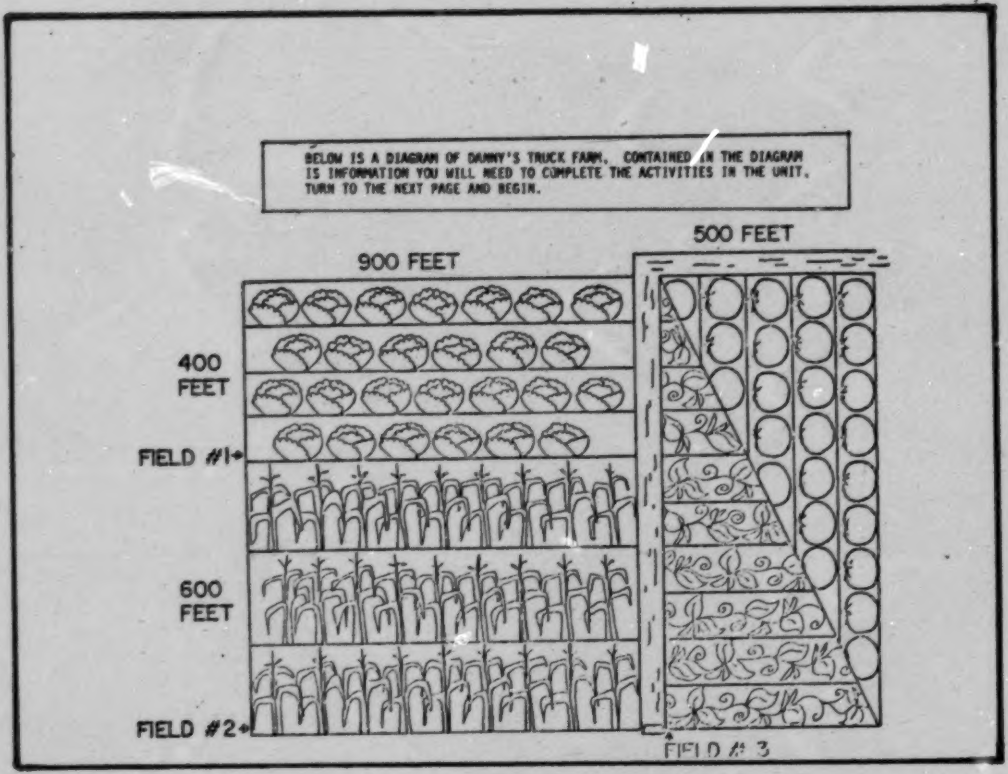
OPTIONAL:

As you have your students discuss the information on this page, you may want to:

1. Call attention to the description of the industry setting in which Danny Morris works.
2. Have students discuss some of the reasons why anyone would want to be self-employed.

KEY - UNIT 10

DIAGRAM OF A TRUCK FARM



BELOW IS A DIAGRAM OF DANNY'S TRUCK FARM. CONTAINED IN THE DIAGRAM IS INFORMATION YOU WILL NEED TO COMPLETE THE ACTIVITIES IN THE UNIT. TURN TO THE NEXT PAGE AND BEGIN.

900 FEET
500 FEET
400 FEET
FIELD #1
600 FEET
FEET
FIELD #2
FIELD #3

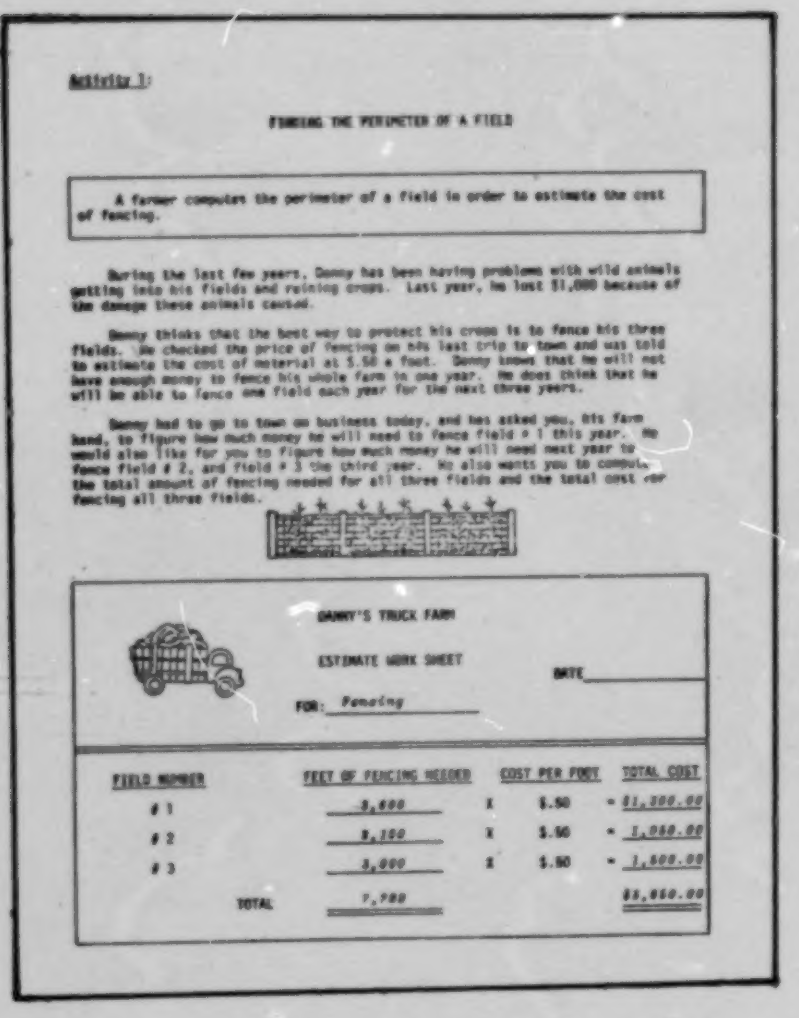
This page illustrates the three fields of the farm and the four crops planted (cabbage, corn, tomatoes, and beans).

The information on this page will be used to complete the problems of Activities 1, 2, and 3.

KEY - UNIT 10

HOW A FARMER USES PERIMETER TO ESTIMATE FENCING COSTS

Activity 1:



Activity 1:

FINDING THE PERIMETER OF A FIELD

A farmer computes the perimeter of a field in order to estimate the cost of fencing.

During the last few years, Danny has been having problems with wild animals getting into his fields and ruining crops. Last year, he lost $1,000 because of the damage these animals caused.

Danny thinks that the best way to protect his crops is to fence his three fields. He checked the price of fencing on his last trip to town and was told to estimate the cost of material at $.50 a foot. Danny knows that he will not have enough money to fence his whole farm in one year. He does think that he will be able to fence one field each year for the next three years.

Danny had to go to town on business today, and has asked you, his farm hand, to figure how much money he will need to fence field # 1 this year. He would also like for you to figure how much money he will need next year to fence field # 2, and field # 3 the third year. He also wants you to compute the total amount of fencing needed for all three fields and the total cost for fencing all three fields.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE__________

FOR: Fencing

FIELD NUMBER	FEET OF FENCING NEEDED		COST PER FOOT		TOTAL COST
# 1	2,600	x	$.50	=	$1,300.00
# 2	2,100	x	$.50	=	1,050.00
# 3	3,000	x	$.50	=	1,500.00
TOTAL	7,700				$3,850.00

This activity introduces students to tasks performed by farmers while providing them with practice in finding the perimeter of rectangles.

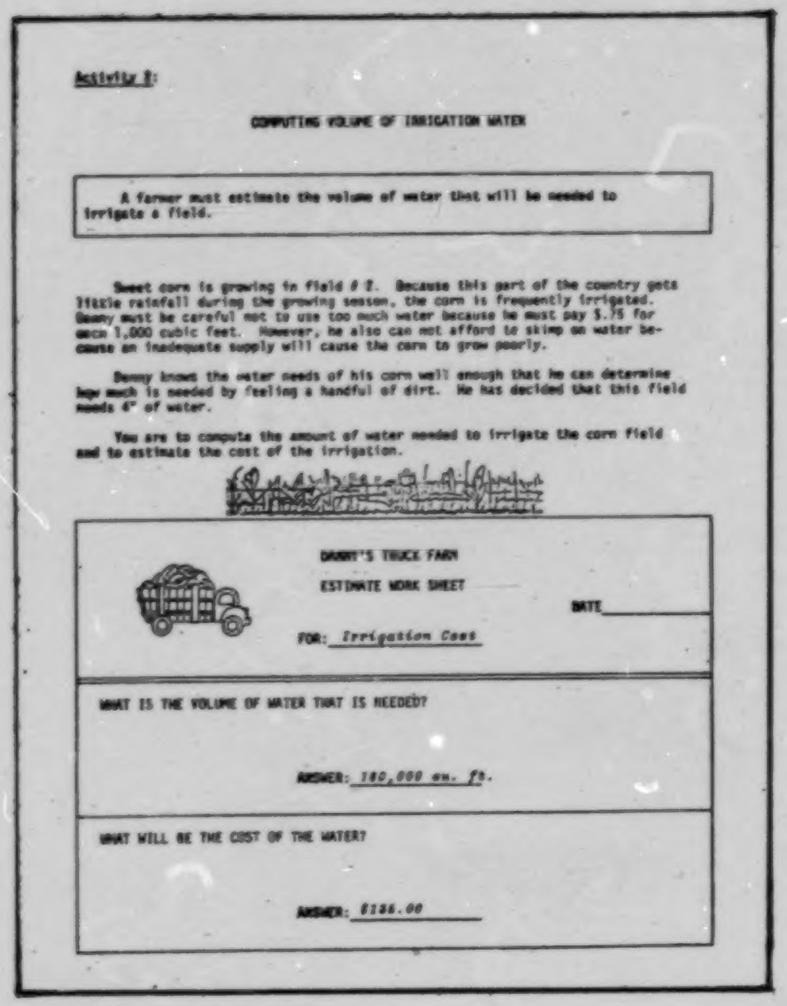
To Solve the Problem:

1. Find the fencing needed for each field.
2. Multiply the answer for each field by 50.
3. Find the fencing needed for all fields by totaling the fencing for each field.
4. Find the total cost for fencing all fields by adding the cost for each field.

KEY - UNIT 10

HOW A FARMER USES VOLUME TO ESTIMATE WATER COSTS

Activity 2:



Activity 2:

COMPUTING VOLUME OF IRRIGATION WATER

A farmer must estimate the volume of water that will be needed to irrigate a field.

Sweet corn is growing in field # 2. Because this part of the country gets little rainfall during the growing season, the corn is frequently irrigated. Danny must be careful not to use too much water because he must pay $.75 for each 1,000 cubic feet. However, he also can not afford to skimp on water because an inadequate supply will cause the corn to grow poorly.

Danny knows the water needs of his corn well enough that he can determine how much is needed by feeling a handful of dirt. He has decided that this field needs 4" of water.

You are to compute the amount of water needed to irrigate the corn field and to estimate the cost of the irrigation.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE________

FOR: *Irrigation Cost*

WHAT IS THE VOLUME OF WATER THAT IS NEEDED?

ANSWER: *180,000 cu. ft.*

WHAT WILL BE THE COST OF THE WATER?

ANSWER: *$135.00*

To Solve the Problem:

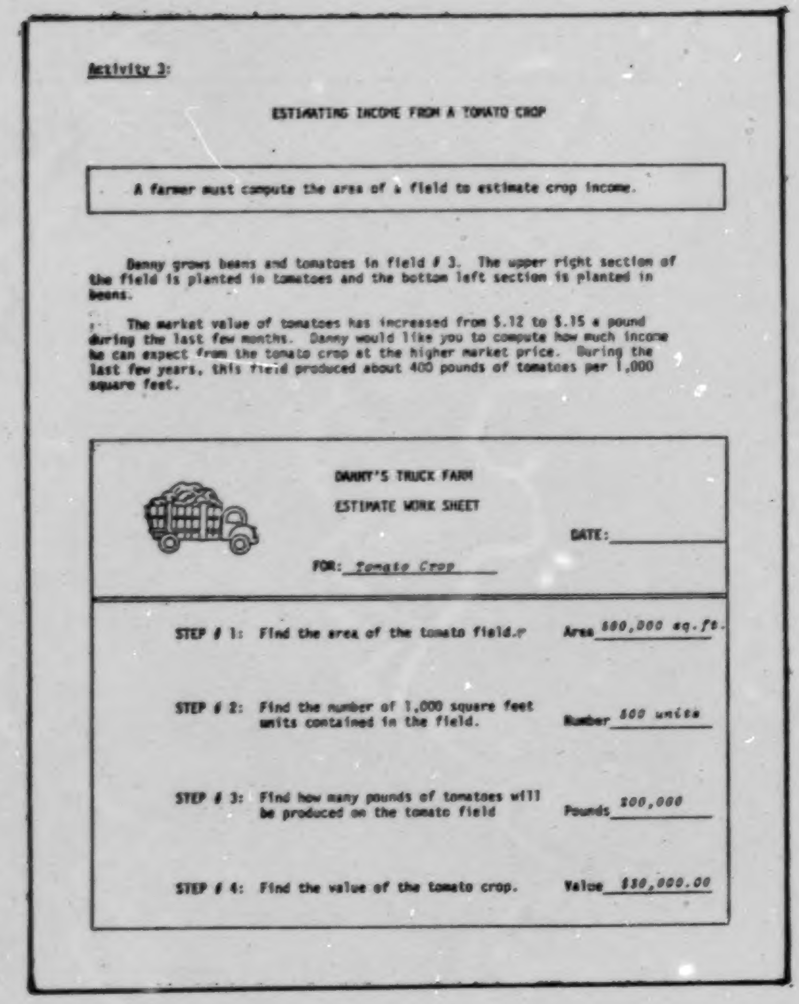
1. Compute the volume of field # 2.
2. Divide the volume (in cubic feet) by 1000 to find how many units of 1,000 cu. ft. are needed.
3. Multiply the number of 1,000 cu. ft. units by $.75.

A typical sweet corn crop is usually irrigated eight times during the growing season. The students may be interested in computing the total cost of irrigating this field for the year.

KEY - UNIT 10

HOW A FARMER USES AREA TO ESTIMATE CROP INCOME

Activity 3:



Activity 3:

ESTIMATING INCOME FROM A TOMATO CROP

A farmer must compute the area of a field to estimate crop income.

Danny grows beans and tomatoes in field # 3. The upper right section of the field is planted in tomatoes and the bottom left section is planted in beans.

The market value of tomatoes has increased from $.12 to $.15 a pound during the last few months. Danny would like you to compute how much income he can expect from the tomato crop at the higher market price. During the last few years, this field produced about 400 pounds of tomatoes per 1,000 square feet.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE:______

FOR: *Tomato Crop*

STEP # 1: Find the area of the tomato field. Area *500,000 sq.ft.*

STEP # 2: Find the number of 1,000 square feet units contained in the field. Number *500 units*

STEP # 3: Find how many pounds of tomatoes will be produced on the tomato field Pounds *200,000*

STEP # 4: Find the value of the tomato crop. Value *$30,000.00*

Solution:

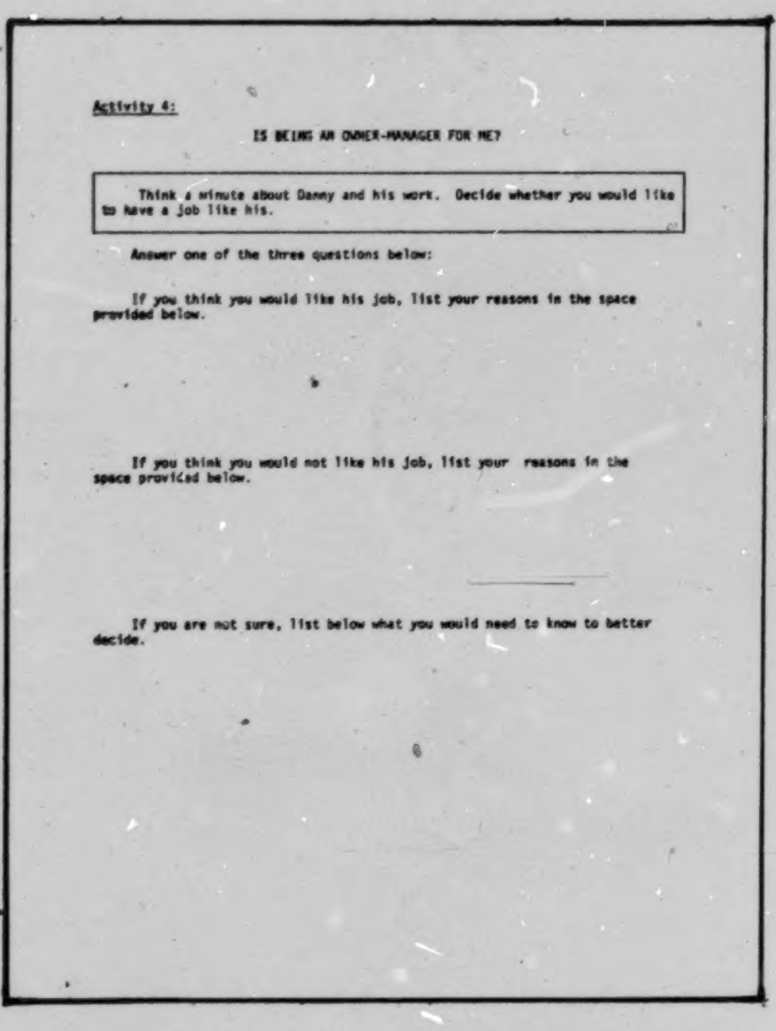
Finding the number of pounds of tomatoes to be grown and multiplying by the income per pound is one way of solving the problem. You may want to ask the students to figure other ways of solving the problem.

1. Find the value of 1,000 sq. ft. (400 lbs. X $.15) and multiplying by the number of 1,000 sq. ft. units.
2. Find the value of the tomatoes grown on 1 sq. ft. $\frac{400}{1000}$ X $.15 and multiply by the number of sq. ft.

KEY - UNIT 10

IS BEING AN OWNER-MANAGER FOR ME?

Activity 4:



Activity 4:

IS BEING AN OWNER-MANAGER FOR ME?

Think a minute about Danny and his work. Decide whether you would like to have a job like his.

Answer one of the three questions below:

If you think you would like his job, list your reasons in the space provided below.

If you think you would not like his job, list your reasons in the space provided below.

If you are not sure, list below what you would need to know to better decide.

Through a class discussion of the student answers to these questions, the teacher and each student will be able to identify individual values (as evidenced by various responses to each question) and individual uniqueness or "how I differ from others."

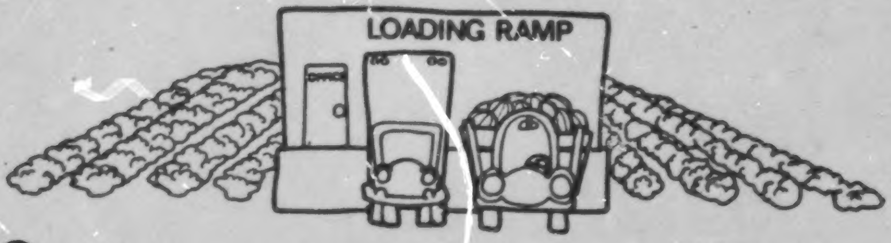
Suggested procedure:

1. Identify the many different answers to each question.
2. Ask for further clarification on why a particular answer was given (emphasize that there are no right answers).
3. Identify influencing values.
4. Identify uniqueness (as seen by you or the students).

UNIT 10

HOW A FARMER USES GEOMETRY TO FIND PERIMETER, AREA, AND VOLUME

The agricultural industry includes the many businesses that work together in helping to meet our nation's food production needs. Examples of typical agricultural businesses are: farms, grain cooperatives, implement dealers, and fertilizer distributors.



Danny Morris owns and manages his own farm in the western part of the United States on which he grows vegetables which he sells in a nearby city. He is called a "truck farmer" because he lives close enough to the places where he sells his crop that he can make deliveries.

The kind of work Danny does as a farmer varies from day to day. One day, you might find him plowing a field; on another day, he may be visiting stores in the city; on still another day, he may be working on his business records. Danny must work long hours during the planting and harvesting seasons. Often his day begins at sunrise and ends at sunset. When Danny is not working, he likes to hunt and fish.

As you work through this unit, you will learn how Danny uses geometry to:

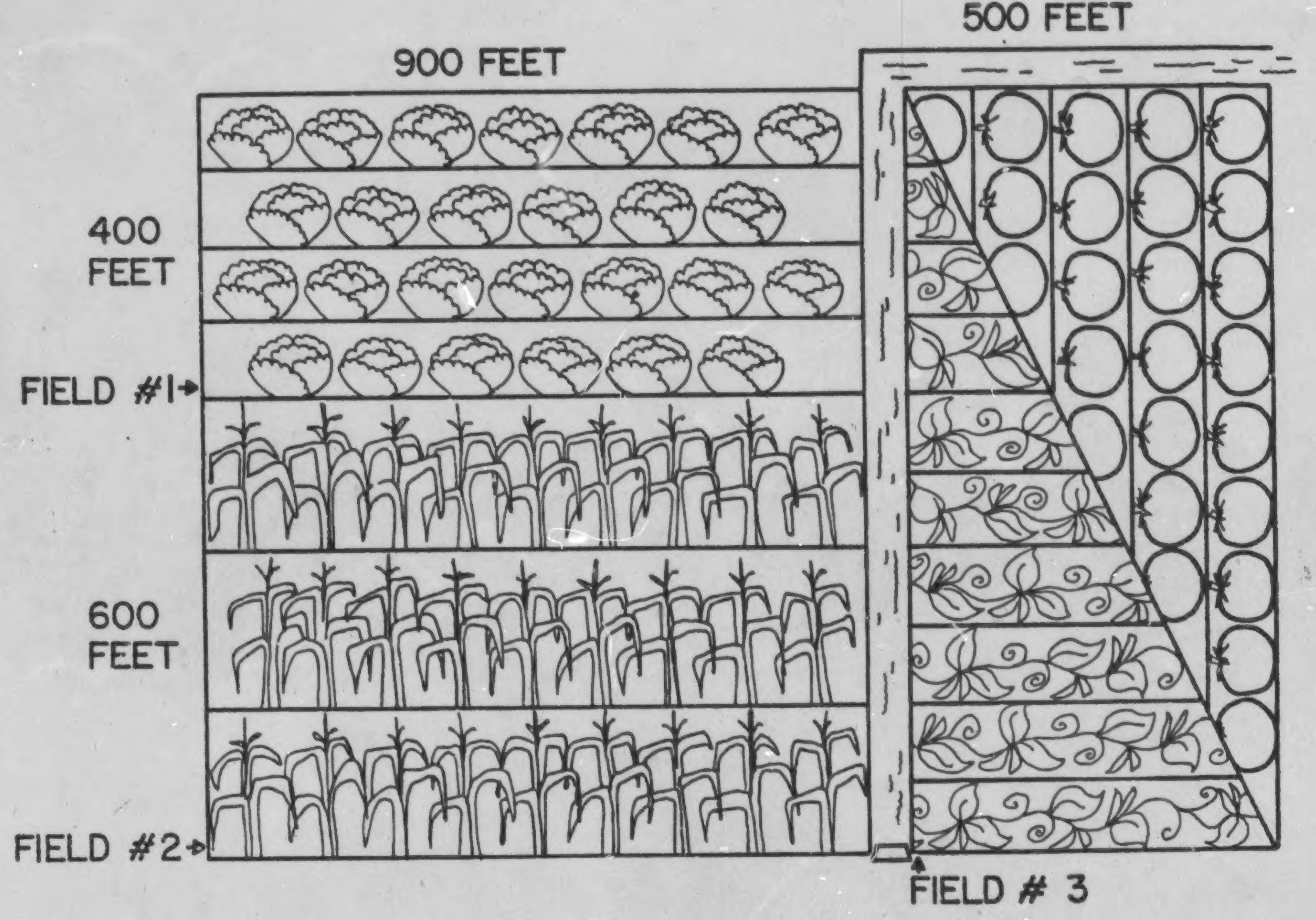
1. Determine how much fencing he will need and how much the fencing will cost.

2. Figure how much water he will use to irrigate a field of corn and how much this water will cost.

3. Estimate the income he will receive from a field of tomatoes.

THE UNITED STATES OF AMERICA
TEN

BELOW IS A DIAGRAM OF DANNY'S TRUCK FARM. CONTAINED IN THE DIAGRAM IS INFORMATION YOU WILL NEED TO COMPLETE THE ACTIVITIES IN THE UNIT. TURN TO THE NEXT PAGE AND BEGIN.


500 FEET
900 FEET
400 FEET
FIELD #1
600 FEET
FIELD #2
FIELD # 3

Activity 1:

FINDING THE PERIMETER OF A FIELD

A farmer computes the perimeter of a field in order to estimate the cost of fencing.

During the last few years, Danny has been having problems with wild animals getting into his fields and ruining crops. Last year, he lost $1,000 because of the damage these animals caused.

Danny thinks that the best way to protect his crops is to fence his three fields. He checked the price of fencing on his last trip to town and was told to estimate the cost of material at $.50 a foot. Danny knows that he will not have enough money to fence his whole farm in one year. He does think that he will be able to fence one field each year for the next three years.

Danny had to go to town on business today, and has asked you, his farm hand, to figure how much money he will need to fence field # 1 this year. He would also like for you to figure how much money he will need next year to fence field # 2, and field # 3 the third year. He also wants you to compute the total amount of fencing needed for all three fields and the total cost for fencing all three fields.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE_______________

FOR:____________________

FIELD NUMBER	FEET OF FENCING NEEDED		COST PER FOOT		TOTAL COST
# 1	__________	X	$.50	=	__________
# 2	__________	X	$.50	=	__________
# 3	__________	X	$.50	=	__________
TOTAL	__________				__________

Activity 2:

COMPUTING VOLUME OF IRRIGATION WATER

A farmer must estimate the volume of water that will be needed to irrigate a field.

Sweet corn is growing in field # 2. Because this part of the country gets little rainfall during the growing season, the corn is frequently irrigated. Danny must be careful not to use too much water because he must pay $.75 for each 1,000 cubic feet. However, he also can not afford to skimp on water because an inadequate supply will cause the corn to grow poorly.

Danny knows the water needs of his corn well enough that he can determine how much is needed by feeling a handful of dirt. He has decided that this field needs 4" of water.

You are to compute the amount of water needed to irrigate the corn field and to estimate the cost of the irrigation.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE________________

FOR:____________________

WHAT IS THE VOLUME OF WATER THAT IS NEEDED?

ANSWER:__________________

WHAT WILL BE THE COST OF THE WATER?

ANSWER:__________________

Activity 3:

ESTIMATING INCOME FROM A TOMATO CROP

A farmer must compute the area of a field to estimate crop income.

Danny grows beans and tomatoes in field # 3. The upper right section of the field is planted in tomatoes and the bottom left section is planted in beans.

The market value of tomatoes has increased from \$.12 to \$.15 a pound during the last few months. Danny would like you to compute how much income he can expect from the tomato crop at the higher market price. During the last few years, this field produced about 400 pounds of tomatoes per 1,000 square feet.

DANNY'S TRUCK FARM

ESTIMATE WORK SHEET

DATE:____________

FOR:________________

STEP # 1: Find the area of the tomato field. Area_______ sq. ft.

STEP # 2: Find the number of 1,000 square feet units contained in the field. Number_______ units

STEP # 3: Find how many pounds of tomatoes will be produced on the tomato field Pounds_______ lbs.

STEP # 4: Find the value of the tomato crop. Value \$__________

Activity 4:

IS BEING AN OWNER-MANAGER FOR ME?

Think a minute about Danny and his work. Decide whether you would like to have a job like his.

Answer one of the three questions below:

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If you think you would not like his job, list your reasons in the space provided below.

If you are not sure, list below what you would need to know to better decide.

UNIT 11

HOW AN ADMINISTRATIVE ASSISTANT FOR THE ENVIRONMENTAL PROTECTION AGENCY MAKES AND INTERPRETS BROKEN LINE GRAPHS

PURPOSE:

This unit introduces students to the job of an administrative assistant for the Environmental Protection Agency while giving them the opportunity to practice their skills at graph making and graph interpretation.

MAJOR ACTIVITIES:

While completing the activities in this unit, the student will:

1. Read a broken line graph and draw from the graph selected data.
2. Check a broken line graph for accuracy.
3. Chart broken line graphs for each of three atmospheric conditions.
4. Extract from four broken line graphs selected information needed by supervisors.

Before Class Begins:

1. Thoroughly acquaint yourself with the student materials (the white sheets at the end of the unit) and determine their applicability to your class.
2. Familiarize yourself with the design of the teacher keys (pages 206-213).
3. Duplicate and assemble enough of the student material for each class member.
4. Read the background information sheet on the administrative assistant (page 205).
5. Review the optional activities.

During Class:

1. Distribute the simulation packet.
2. With the students, read and discuss the introductory information on page 214.

During Class (continued):

3. Ask the students to complete the activities on pages 214 through 222. While they are busy with their tasks, you may wish to review all of the information on the keys, pages 205 through 213.

4. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the keys to each of the activities.

OPTIONAL ACTIVITIES:

Environmental

Investigate the air quality monitoring procedures for your community. A good source for this information is the air pollution control officer at your local department of health.

Administrative Assistant

Establish special jobs for students; i.e., recording class attendance, requests to leave the room, etc. Determine a list of "special situations" the students are to report.

Guest Speaker

Invite an administrative assistant to submit to a class interview about their job. If a parent meets the criteria of an administrative assistant (see background information sheet), consider asking this person to be the first speaker. Refer to the information in Appencix C, "Guidelines for Conducting Interviews" and "Sample Interview Guide."

GENERAL INFORMATION SHEET ON AN ADMINISTRATIVE ASSISTANT

The expansion in the volume of data which flows through the modern office and the corresponding increase in the number of decisions now required of business management have resulted in the creation of a new position--the administrative assistant.

The administrative assistant has a dual responsibility. As a member of the administrative support staff, he or she filters and expedites the flow of business data. As a member of the managerial staff, he or she makes minor decisions; thus the managers can devote their time to the more important aspects of the operation of a business.

HOW DO YOU GET TO BE AN ADMINISTRATIVE ASSISTANT?

Working your way up:

Traditionally, clerical and secretarial employees who have impressed their employees with their efficiency, initiative, judgment, and organizational ability are singled out to become administrative assistants.

Training programs:

Recently, colleges and vocational schools have developed training programs for administrative assistants. In these programs, students learn a combination of secretarial and managerial skills.

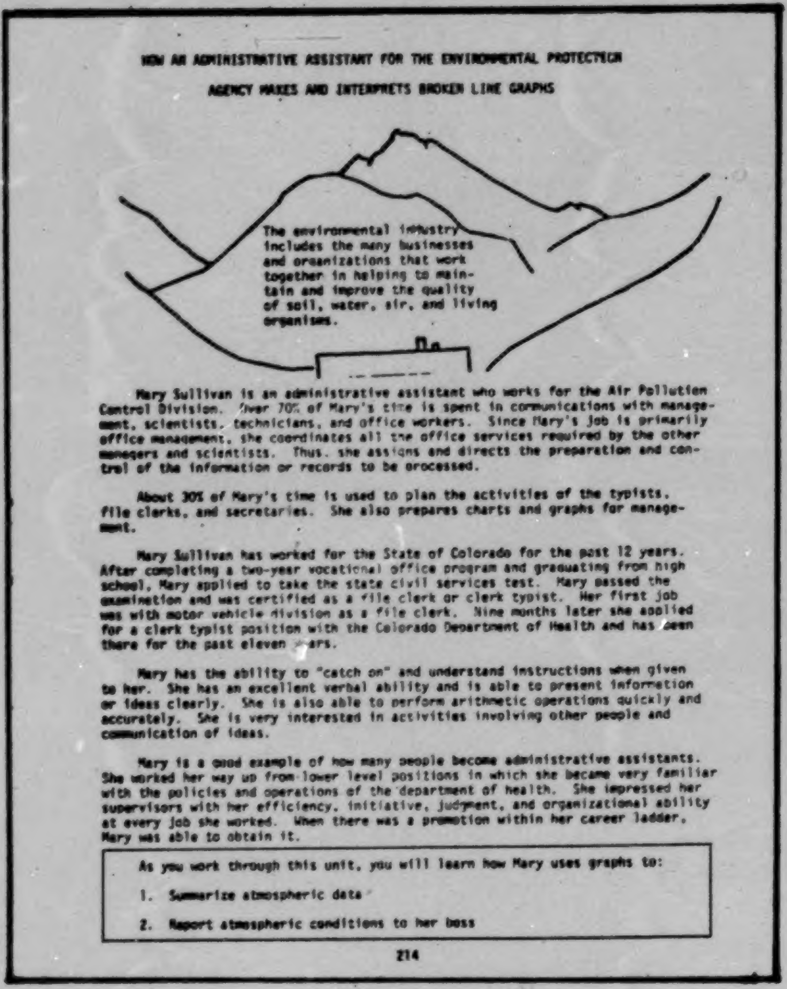
University training:

Some businesses hire college graduates with degrees in business administration to be administrative assistants. Through their work as administrative assistants, entry level management personnel become familiar with the functioning of all phases of an organization, and as a result of these experiences, they develop the background needed to assume higher level management positions.

KEY - UNIT 11

HOW AN ADMINISTRATIVE ASSISTANT FOR THE ENVIRONMENTAL PROTECTION AGENCY MAKES AND INTERPRETS BROKEN LINE GRAPHS

Introductory Page:



HOW AN ADMINISTRATIVE ASSISTANT FOR THE ENVIRONMENTAL PROTECTION AGENCY MAKES AND INTERPRETS BROKEN LINE GRAPHS

The environmental industry includes the many businesses and organizations that work together in helping to maintain and improve the quality of soil, water, air, and living organisms.

Mary Sullivan is an administrative assistant who works for the Air Pollution Control Division. Over 70% of Mary's time is spent in communications with management, scientists, technicians, and office workers. Since Mary's job is primarily office management, she coordinates all the office services required by the other managers and scientists. Thus, she assigns and directs the preparation and control of the information or records to be processed.

About 30% of Mary's time is used to plan the activities of the typists, file clerks, and secretaries. She also prepares charts and graphs for management.

Mary Sullivan has worked for the State of Colorado for the past 12 years. After completing a two-year vocational office program and graduating from high school, Mary applied to take the state civil services test. Mary passed the examination and was certified as a file clerk or clerk typist. Her first job was with motor vehicle division as a file clerk. Nine months later she applied for a clerk typist position with the Colorado Department of Health and has been there for the past eleven years.

Mary has the ability to "catch on" and understand instructions when given to her. She has an excellent verbal ability and is able to present information or ideas clearly. She is also able to perform arithmetic operations quickly and accurately. She is very interested in activities involving other people and communication of ideas.

Mary is a good example of how many people become administrative assistants. She worked her way up from lower level positions in which she became very familiar with the policies and operations of the department of health. She impressed her supervisors with her efficiency, initiative, judgment, and organizational ability at every job she worked. When there was a promotion within her career ladder, Mary was able to obtain it.

As you work through this unit, you will learn how Mary uses graphs to:

1. Summarize atmospheric data
2. Report atmospheric conditions to her boss

214

This page introduces the students to the environmental industry, Mary Sullivan, and the activities of the unit. Ask the students to read this page. Once they are finished, you may want to:

1. Look at the environmental industry. Solicit views of what businesses in your community may be environmental.

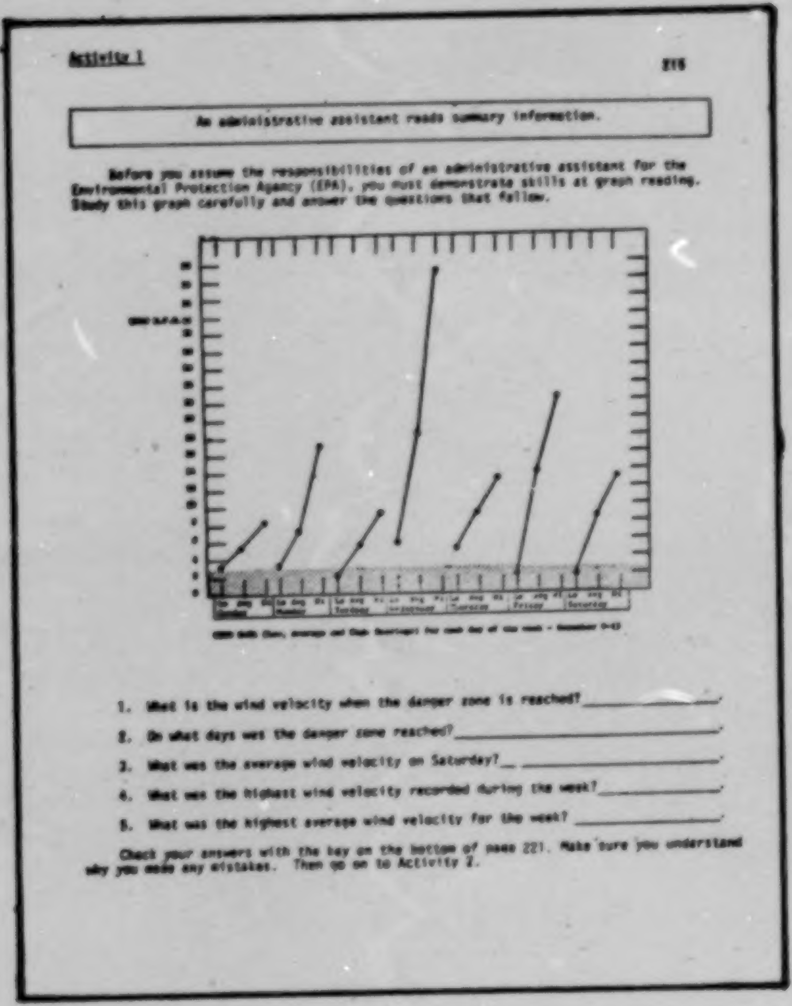
2. Discuss Mary Sullivan. Is there anything special about her that makes her good at her job?

3. Review the work in the unit. What does it mean to summarize information? Why is summary information important?

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT READS SUMMARY INFORMATION

Activity 1:



Activity 1

215

An administrative assistant reads summary information.

Before you assume the responsibilities of an administrative assistant for the Environmental Protection Agency (EPA), you must demonstrate skills at graph reading. Study this graph carefully and answer the questions that follow.

1. What is the wind velocity when the danger zone is reached? ________.
2. On what days was the danger zone reached? ________.
3. What was the average wind velocity on Saturday? ________.
4. What was the highest wind velocity recorded during the week? ________.
5. What was the highest average wind velocity for the week? ________.

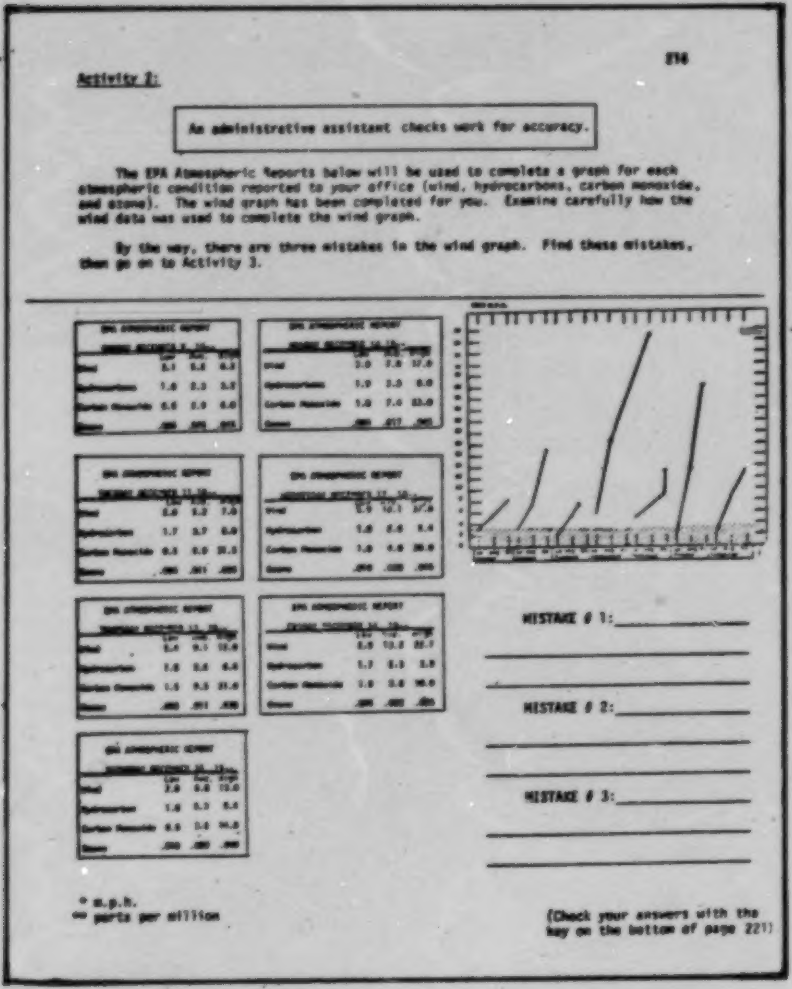
Check your answers with the key on the bottom of page 221. Make sure you understand why you made any mistakes. Then go on to Activity 2.

This activity is a self test in graph reading and an introduction to the kind of graphing that will be done in this unit. Identify any students who do not understand the answers to the questions and give them the help they need.

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT CHECKS WORK FOR ACCURACY

Activity 2:



Activity 2:

An administrative assistant checks work for accuracy.

The EPA Atmospheric Reports below will be used to complete a graph for each atmospheric condition reported to your office (wind, hydrocarbons, carbon monoxide, and ozone). The wind graph has been completed for you. Examine carefully how the wind data was used to complete the wind graph.

By the way, there are three mistakes in the wind graph. Find these mistakes, then go on to Activity 3.

MISTAKE # 1:________________

MISTAKE # 2:________________

MISTAKE # 3:________________

* m.p.h.
** parts per million

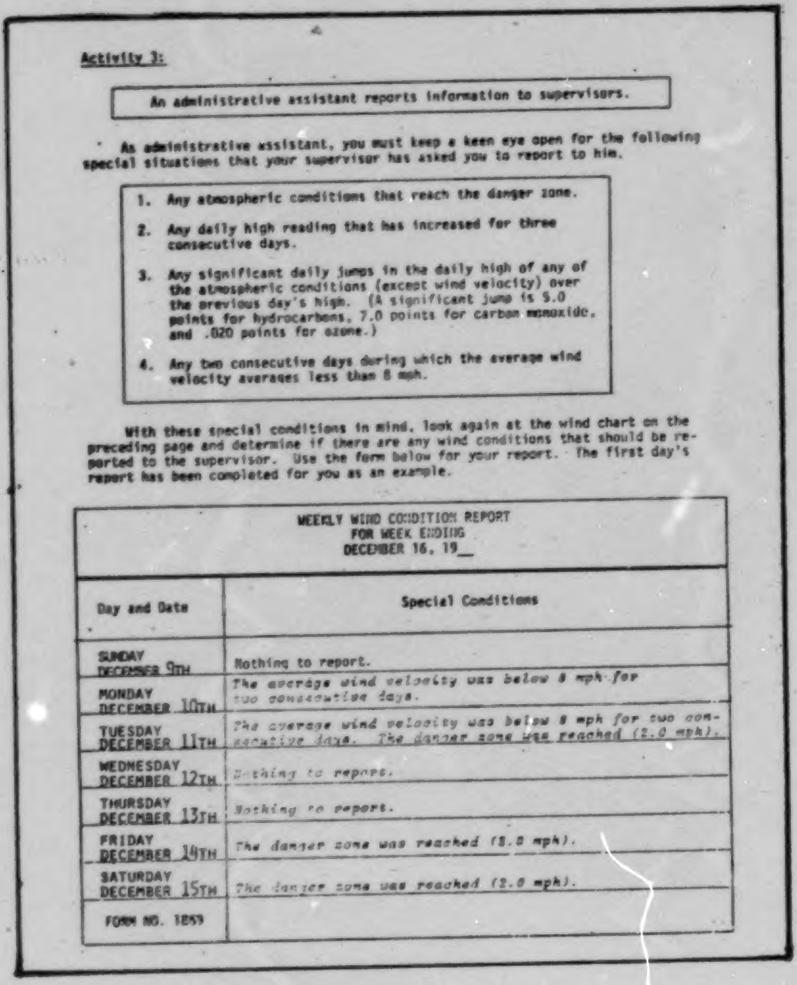
(Check your answers with the key on the bottom of page 221)

This is a self test in drawing data from information sheets (E. P. A. Report) and transferring that information to a broken line graph. Identify any students who do not understand the answers to the questions and give them the help they need.

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT REPORTS INFORMATION TO SUPERVISORS

Activity 3:



Activity 3:

An administrative assistant reports information to supervisors.

As administrative assistant, you must keep a keen eye open for the following special situations that your supervisor has asked you to report to him.

1. Any atmospheric conditions that reach the danger zone.
2. Any daily high reading that has increased for three consecutive days.
3. Any significant daily jumps in the daily high of any of the atmospheric conditions (except wind velocity) over the previous day's high. (A significant jump is 5.0 points for hydrocarbons, 7.0 points for carbon monoxide, and .020 points for ozone.)
4. Any two consecutive days during which the average wind velocity averages less than 8 mph.

With these special conditions in mind, look again at the wind chart on the preceding page and determine if there are any wind conditions that should be reported to the supervisor. Use the form below for your report. The first day's report has been completed for you as an example.

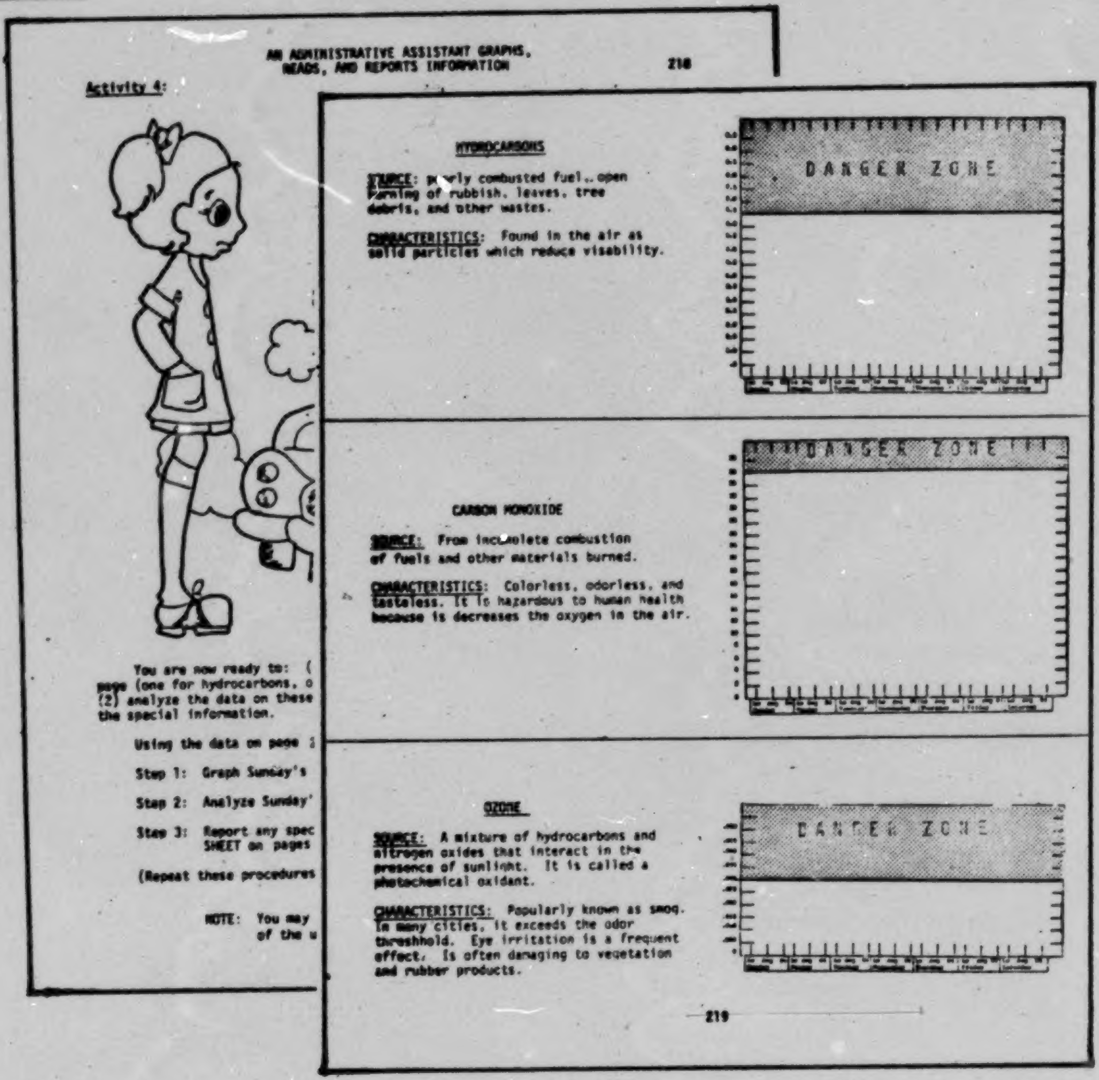
WEEKLY WIND CONDITION REPORT
FOR WEEK ENDING
DECEMBER 16, 19__

Day and Date	Special Conditions
SUNDAY DECEMBER 9TH	Nothing to report.
MONDAY DECEMBER 10TH	*The average wind velocity was below 8 mph for two consecutive days.*
TUESDAY DECEMBER 11TH	*The average wind velocity was below 8 mph for two consecutive days. The danger zone was reached (2.0 mph).*
WEDNESDAY DECEMBER 12TH	*Nothing to report.*
THURSDAY DECEMBER 13TH	*Nothing to report.*
FRIDAY DECEMBER 14TH	*The danger zone was reached (2.0 mph).*
SATURDAY DECEMBER 15TH	*The danger zone was reached (2.0 mph).*
FORM NO. 1053	

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT GRAPHS, READS, AND REPORTS INFORMATION

Activity 4:



AN ADMINISTRATIVE ASSISTANT GRAPHS, READS, AND REPORTS INFORMATION 218

Activity 4:

You are now ready to: (
page (one for hydrocarbons, o
(2) analyze the data on these
the special information.

Using the data on page 2

Step 1: Graph Sunday's

Step 2: Analyze Sunday'

Step 3: Report any spec
SHEET on pages

(Repeat these procedures

NOTE: You may
of the u

HYDROCARBONS

SOURCE: poorly combusted fuel.. open burning of rubbish, leaves, tree debris, and other wastes.

CHARACTERISTICS: Found in the air as solid particles which reduce visability.

CARBON MONOXIDE

SOURCE: From incomplete combustion of fuels and other materials burned.

CHARACTERISTICS: Colorless, odorless, and tasteless. It is hazardous to human health because is decreases the oxygen in the air.

OZONE

SOURCE: A mixture of hydrocarbons and nitrogen oxides that interact in the presence of sunlight. It is called a photochemical oxidant.

CHARACTERISTICS: Popularly known as smog. In many cities, it exceeds the odor threshhold. Eye irritation is a frequent effect. Is often damaging to vegetation and rubber products.

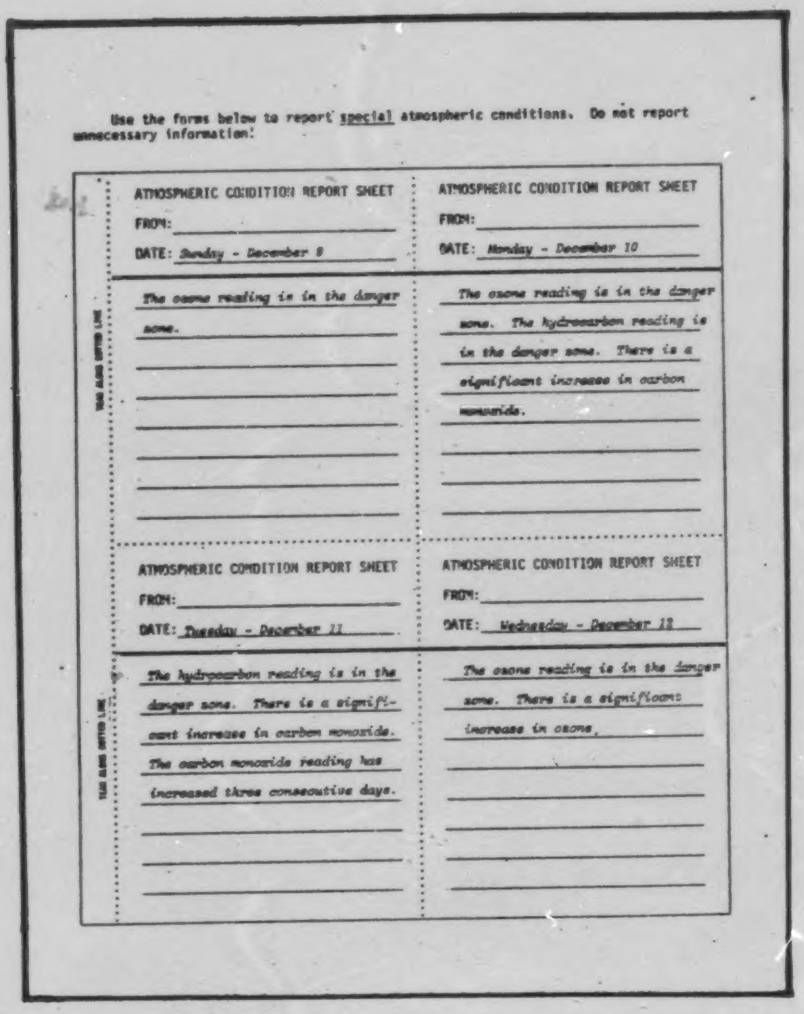
219

Above are the first and second pages of Activity 4. The first page gives instructions for the activity. On the second page is the graphic representation of the atmospheric data.

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT GRAPHS, READS, AND REPORTS INFORMATION

Activity 4 (continued):



Use the forms below to report special atmospheric conditions. Do not report unnecessary information!

ATMOSPHERIC CONDITION REPORT SHEET

FROM:

DATE: *Sunday - December 9*

The ozone reading is in the danger zone.

ATMOSPHERIC CONDITION REPORT SHEET

FROM:

DATE: *Monday - December 10*

The ozone reading is in the danger zone. The hydrocarbon reading is in the danger zone. There is a significant increase in carbon monoxide.

ATMOSPHERIC CONDITION REPORT SHEET

FROM:

DATE: *Tuesday - December 11*

The hydrocarbon reading is in the danger zone. There is a significant increase in carbon monoxide. The carbon monoxide reading has increased three consecutive days.

ATMOSPHERIC CONDITION REPORT SHEET

FROM:

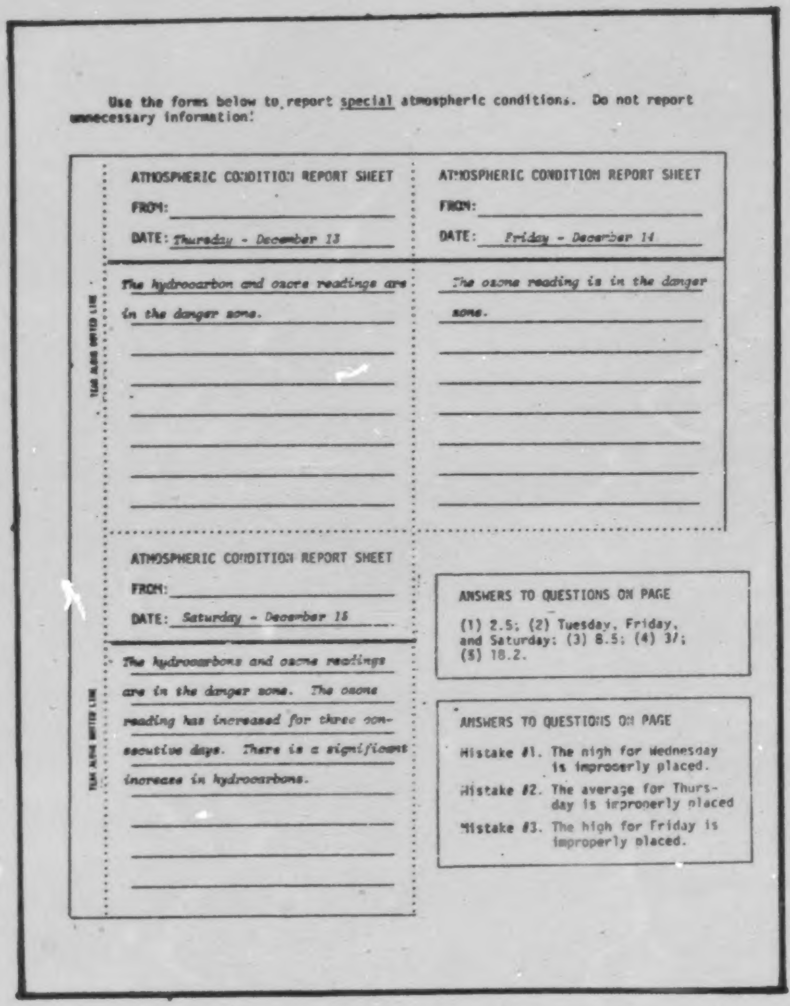
DATE: *Wednesday - December 12*

The ozone reading is in the danger zone. There is a significant increase in ozone.

KEY - UNIT 11

AN ADMINISTRATIVE ASSISTANT GRAPHS, READS, AND REPORTS INFORMATION

Activity 4 (continued):



Use the forms below to report special atmospheric conditions. Do not report unnecessary information:

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: __________

DATE: *Thursday - December 13*

The hydrocarbon and ozone readings are in the danger zone.

ATMOSPHERIC CONDITION REPORT SHEET

FROM: __________

DATE: *Friday - December 14*

The ozone reading is in the danger zone.

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: __________

DATE: *Saturday - December 15*

The hydrocarbons and ozone readings are in the danger zone. The ozone reading has increased for three consecutive days. There is a significant increase in hydrocarbons.

ANSWERS TO QUESTIONS ON PAGE

(1) 2.5; (2) Tuesday, Friday, and Saturday; (3) 8.5; (4) 37; (5) 18.2.

ANSWERS TO QUESTIONS ON PAGE

Mistake #1. The high for Wednesday is improperly placed.

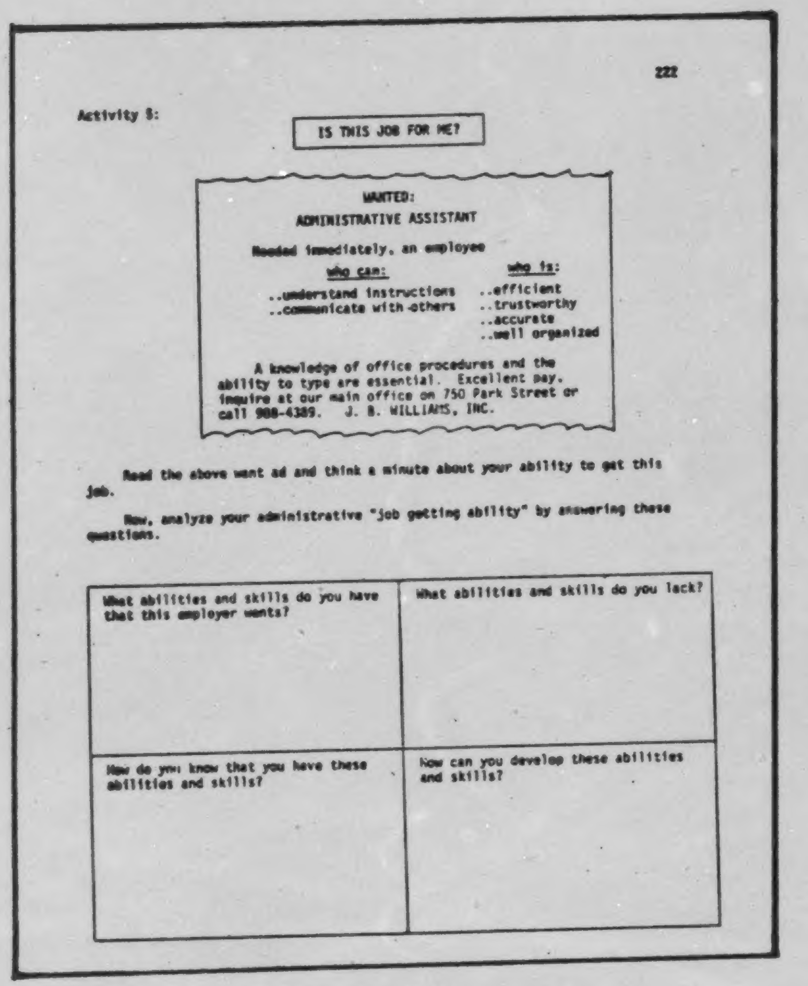
Mistake #2. The average for Thursday is improperly placed

Mistake #3. The high for Friday is improperly placed.

KEY - UNIT 11

IS THIS JOB FOR ME?

Activity 5:



222

Activity 5:

IS THIS JOB FOR ME?

WANTED:
ADMINISTRATIVE ASSISTANT

Needed immediately, an employee

who can:	who is:
..understand instructions	..efficient
..communicate with others	..trustworthy
	..accurate
	..well organized

A knowledge of office procedures and the ability to type are essential. Excellent pay. Inquire at our main office on 750 Park Street or call 908-4389. J. B. WILLIAMS, INC.

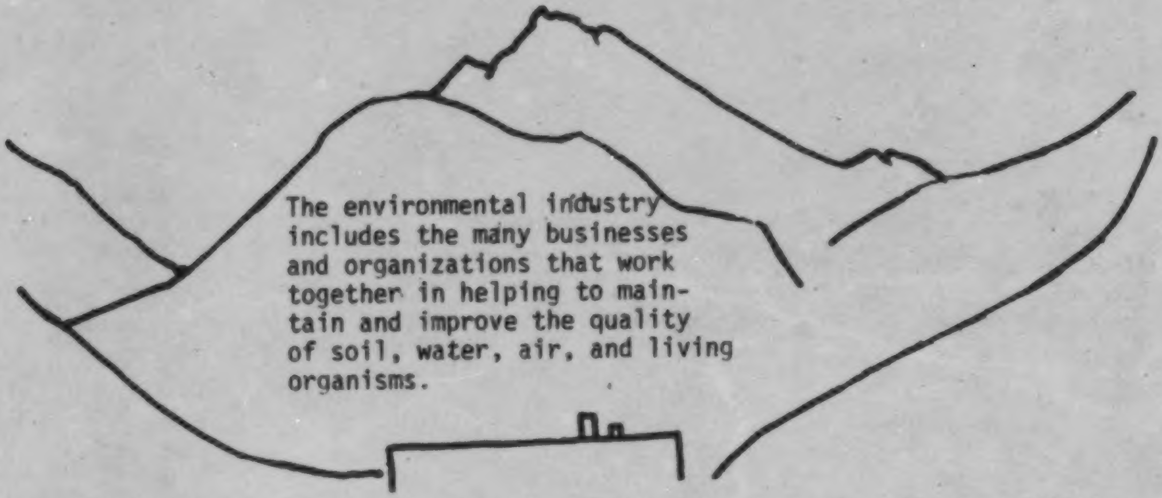
Read the above want ad and think a minute about your ability to get this job.

Now, analyze your administrative "job getting ability" by answering these questions.

What abilities and skills do you have that this employer wants?	What abilities and skills do you lack?
How do you know that you have these abilities and skills?	How can you develop these abilities and skills?

In completing this activity, students must make decisions about how they view themselves. Through the decisions they make and the help you give them in analyzing their decisions, the student will become more "self-aware."

HOW AN ADMINISTRATIVE ASSISTANT FOR THE ENVIRONMENTAL PROTECTION AGENCY MAKES AND INTERPRETS BROKEN LINE GRAPHS



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1. Summarize atmospheric data

2. Report atmospheric conditions to her boss

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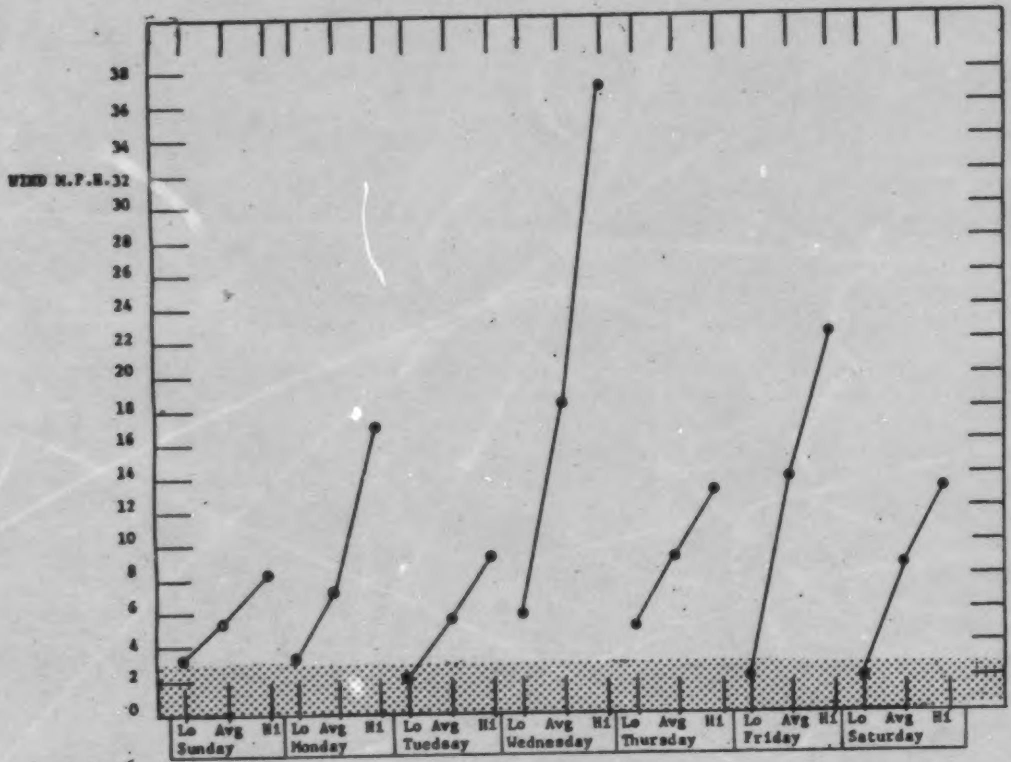


WIND DATA (Low, Average and High Readings) for each day of the week - December 9-15

1. What is the wind velocity when the danger zone is reached?____________________.

2. On what days was the danger zone reached?____________________________________.

3. What was the average wind velocity on Saturday?__ __________________________.

4. What was the highest wind velocity recorded during the week?__________________.

5. What was the highest average wind velocity for the week? ____________________.

Check your answers with the key on the bottom of page 221. Make sure you understand why you made any mistakes. Then go on to Activity 2.

Activity 2:

An administrative assistant checks work for accuracy.

The EPA Atmospheric Reports below will be used to complete a graph for each atmospheric condition reported to your office (wind, hydrocarbons, carbon monoxide, and ozone). The wind graph has been completed for you. Examine carefully how the wind data was used to complete the wind graph.

By the way, there are three mistakes in the wind graph. Find these mistakes, then go on to Activity 3.

EPA ATMOSPHERIC REPORT

SUNDAY DECEMBER 9, 19--

	Low	Ave.	High
Wind *	3.1	5.2	8.2
Hydrocarbons **	1.8	2.3	3.2
Carbon Monoxide **	0.5	2.9	6.0
Ozone **	.005	.026	.045

EPA ATMOSPHERIC REPORT

MONDAY DECEMBER 10,19--

	Low	Ave.	High
Wind	3.0	7.0	17.0
Hydrocarbons	1.9	3.3	8.0
Carbon Monoxide	1.0	7.4	23.0
Ozone	.005	.017	.045

EPA ATMOSPHERIC REPORT

TUESDAY DECEMBER 11,19--

	Low	Ave.	High
Wind	2.0	5.2	7.0
Hydrocarbon	1.7	3.7	8.0
Carbon Monoxide	0.5	9.9	31.5
Ozone	.005	.011	.025

EPA ATMOSPHERIC REPORT

WEDNESDAY DECEMBER 12, 19--

	Low	Ave.	High
Wind	5.9	18.1	37.8
Hydrocarbon	1.8	2.6	5.4
Carbon Monoxide	1.0	4.8	20.0
Ozone	.010	.028	.045

EPA ATMOSPHERIC REPORT

THURSDAY DECEMBER 13, 19--

	Low	Ave.	High
Wind	5.4	9.1	13.0
Hydrocarbon	1.8	3.6	6.6
Carbon Monoxide	1.5	9.5	21.0
Ozone	.005	.011	.030

EPA ATMOSPHERIC REPORT

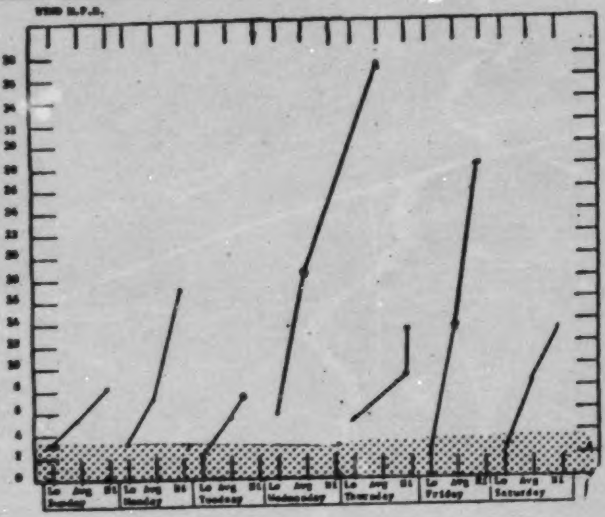
FRIDAY DECEMBER 14, 19--

	Low	Ave.	High
Wind	2.0	13.2	22.7
Hydrocarbon	1.7	2.3	3.8
Carbon Monoxide	1.0	3.0	10.0
Ozone	.005	.022	.035

EPA ATMOSPHERIC REPORT

SATURDAY DECEMBER 15, 19--

	Low	Ave.	High
Wind	2.0	8.8	13.0
Hydrocarbon	1.8	5.3	9.4
Carbon Monoxide	0.5	3.6	14.0
Ozone	.010	.029	.040



MISTAKE # 1: ____________________

MISTAKE # 2: ____________________

MISTAKE # 3: ____________________

* m.p.h.
** parts per million

(Check your answers with the key on the bottom of page 221).

Activity 3:

An administrative assistant reports information to supervisors.

As administrative assistant, you must keep a keen eye open for the following special situations that your supervisor has asked you to report.

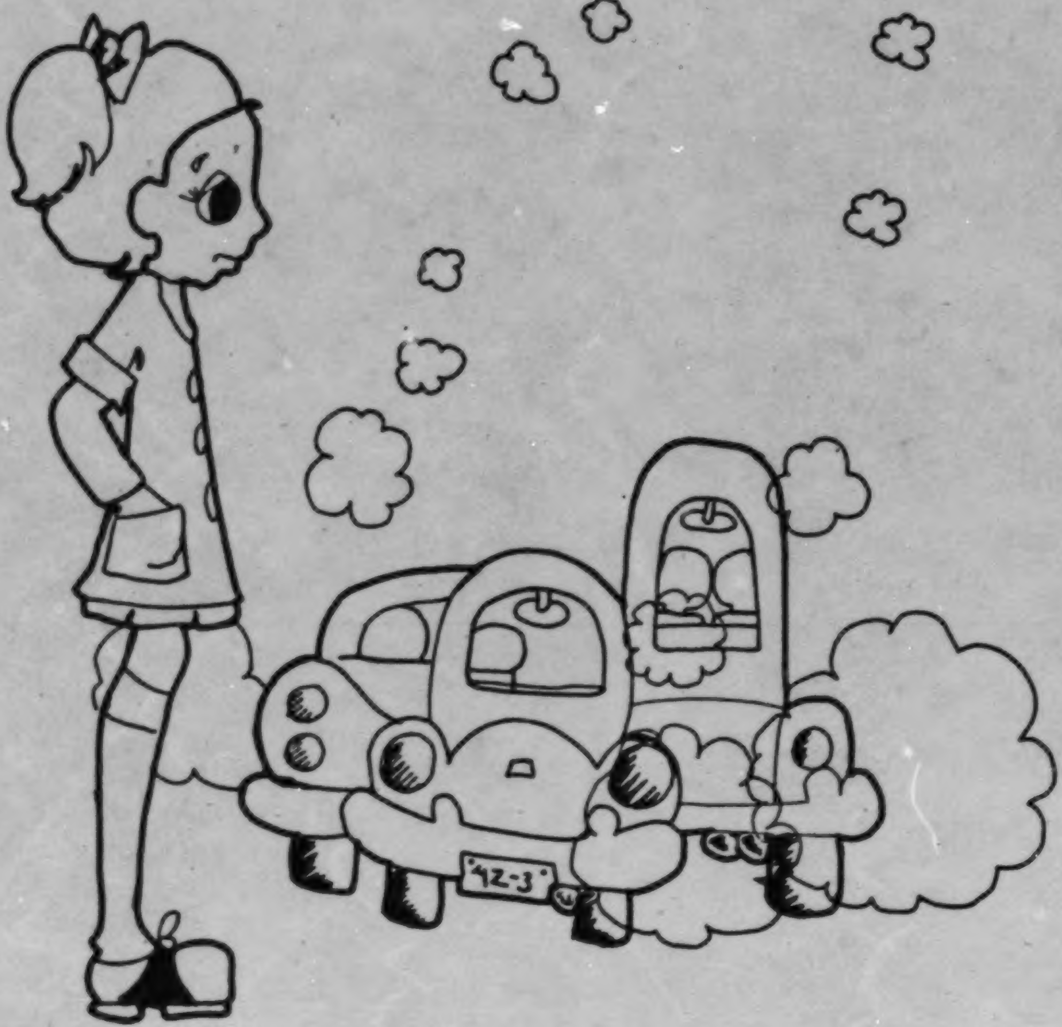
1. Any atmospheric conditions that reach the danger zone.
2. Any daily high reading that has increased for three consecutive days.
3. Any significant daily jumps in the daily high of any of the atmospheric conditions (except wind velocity) over the previous day's high. (A significant jump is 5.0 points for hydrocarbons, 7.0 points for carbon monoxide, and .020 points for ozone.)
4. Any two consecutive days during which the average wind velocity averages less than 8 mph.

With these special conditions in mind, look again at the wind chart on the preceding page and determine if there are any wind conditions that should be reported to the supervisor. Use the form below for your report. The first day's report has been completed for you as an example.

WEEKLY WIND CONDITION REPORT
FOR WEEK ENDING
DECEMBER 16, 19__

Day and Date	Special Conditions
SUNDAY DECEMBER 9TH	Nothing to report.
FORM NO. 1869	

Activity 4:



You are now ready to: (1) complete the remaining three graphs on the next page (one for hydrocarbons, one for carbon monoxide, and one for ozone), (2) analyze the data on these graphs for special information, and (3) report the special information.

Using the data on page 216, follow these procedures:

Step 1: Graph Sunday's data.

Step 2: Analyze Sunday's data for special conditions.

Step 3: Report any special conditions on the ATMOSPHERIC CONDITIONS REPORT SHEET on pages 220 and 221.

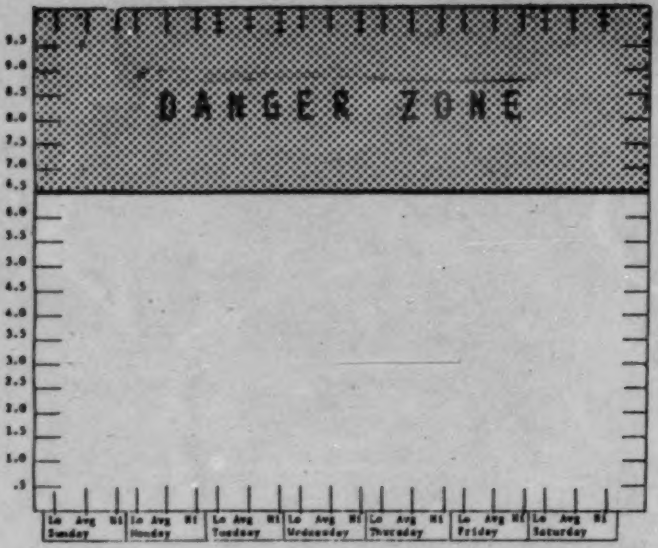
(Repeat these procedures for the remaining six days.)

NOTE: You may find it helpful to detach the last four pages of the unit while you complete this activity.

HYDROCARBONS

SOURCE: poorly combusted fuel, open burning of rubbish, leaves, tree debris, and other wastes.

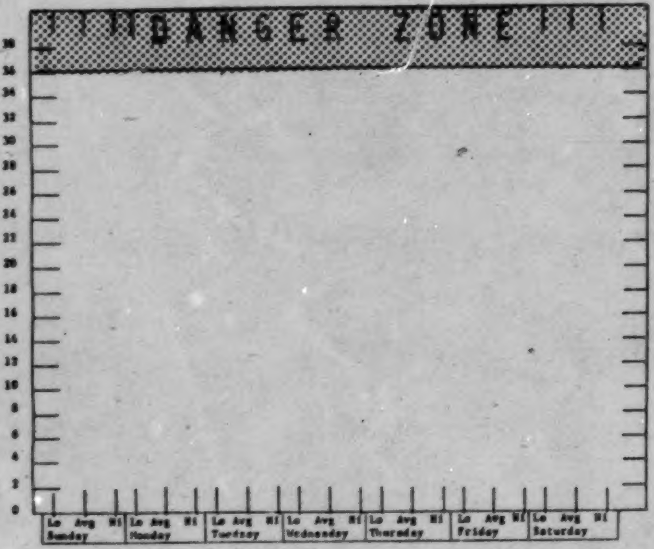
CHARACTERISTICS: Found in the air as solid particles which reduce visability.



CARBON MONOXIDE

SOURCE: From incomolete combustion of fuels and other materials burned.

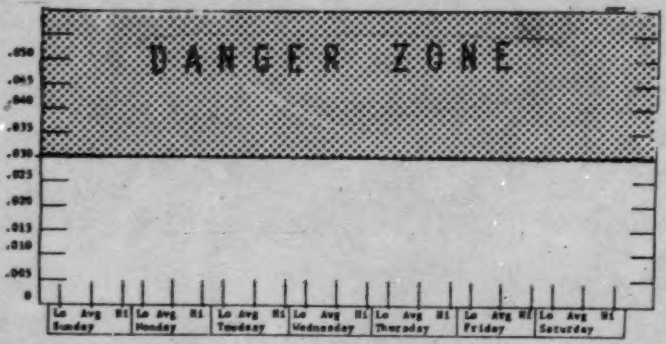
CHARACTERISTICS: Colorless, odorless, and tasteless. It is hazardous to human health because is decreases the oxygen in the air.



OZONE

SOURCE: A mixture of hydrocarbons and nitrogen oxides that interact in the presence of sunlight. It is called a photochemical oxidant.

CHARACTERISTICS: Popularly known as smog. In many cities, it exceeds the odor threshhold. Eye irritation is a frequent effect. Is often damaging to vegetation and rubber products.



Use the forms below to report special atmospheric conditions. Do not report unnecessary information!

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ______________________

DATE: ______________________

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ______________________

DATE: ______________________

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ______________________

DATE: ______________________

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ______________________

DATE: ______________________

Use the forms below to report special atmospheric conditions. Do not report unnecessary information!

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ____________________

DATE: ____________________

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ____________________

DATE: ____________________

TEAR ALONG DOTTED LINE

ATMOSPHERIC CONDITION REPORT SHEET

FROM: ____________________

DATE: ____________________

ANSWERS TO QUESTIONS ON PAGE

(1) 2.5; (2) Tuesday, Friday, and Saturday; (3) 8.5; (4) 37; (5) 18.2.

ANSWERS TO QUESTIONS ON PAGE

Mistake #1. The high for Wednesday is improperly placed.

Mistake #2. The average for Thursday is improperly placed

Mistake #3. The high for Friday is improperly placed.

Activity 5:

IS THIS JOB FOR ME?

WANTED:

ADMINISTRATIVE ASSISTANT

Needed immediately, an employee

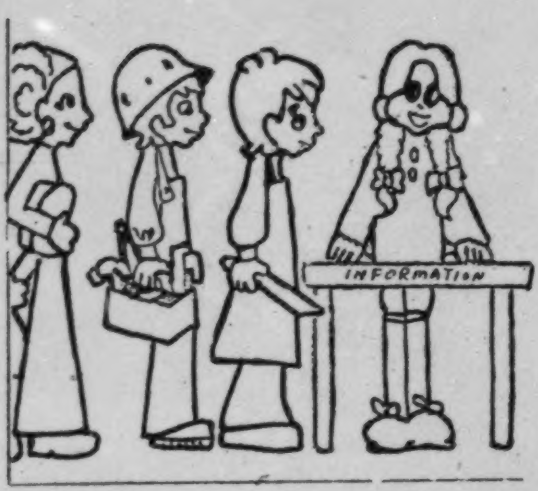
who can:	who is:
..understand instructions	..efficient
..communicate with others	..trustworthy
	..accurate
	..well organized

A knowledge of office procedures and the ability to type are essential. Excellent pay, inquire at our main office on 750 Park Street or call 988-4389. J. B. WILLIAMS, INC.

Read the above want ad and think a minute about your ability to get this job.

Now, analyze your administrative "job getting ability" by answering these questions.

What abilities and skills do you have that this employer wants?	What abilities and skills do you lack?
How do you know that you have these abilities and skills?	How can you develop these abilities and skills?



UNIT 12

HOW AN INFORMATION SPECIALIST ANSWERS REQUESTS ABOUT THE METRIC SYSTEM

PURPOSE:

The purpose of this unit is to help students apply their knowledge about the metric system while simulating the job of an information specialist in a local Chamber of Commerce.

MAJOR ACTIVITIES:

This unit is composed of a simulation of the work performed by an information specialist. This unit requires the student to think in metric measures as they relate to everyday things. Note the emphasis on thinking metrically as opposed to converting from our customary system to the metric system.

Before Class Begins:

1. Teach the basic unit in your mathematics curriculum on the metric system, using all the media available in your school system on the metric system.
2. Duplicate the student materials at the end of this unit, making enough copies to supply every member of the class with one copy.
3. Read "Background Story on Information Specialists" which is located on page 227 .

During Class:

1. Distribute the student materials and introduce the unit by discussing the illustration shown on the first page of the student material. A discussion guide for this page is given in the teacher's key, page 228.

2. Ask students to read the metric leaflet on pages 236 - 238, and then assume the role of Information Specialist by answering the questions posed by the "walk-in visitors" on pages 239-242.

3. Optional Procedures--Have students role play as follows:

   a. Ask for two or three volunteers to take the role of Information Specialists. The students who volunteer must read the Metric Leaflet carefully before the simulation begins. Later groups will learn much of the metric content from observing the first group in action. Let them volunteer after the first time through.

   b. Set up a counter or desk arrangement so that the Information Specialists can take turns standing or sitting behind it as they would in a local government office or Chamber of Commerce office.

   c. Allow members of the class individually to take roles of the information seekers shown on the "Walk-in Visitors" activity sheets. The person who takes the first role (meat market operator) on the sheet approaches the information specialist, asks the first question on the sheet, and waits for an answer. Then the second person goes up and asks the second question, and this process is repeated until all questions have been asked and answered.

4. Check the answers given by the Information Specialists, using the teacher's key contained in this unit.

5. Encourage students to discuss and answer the questions on the sheet entitled, "Is This Type of Job for Me?" after the unit activity has been completed.

6. If time permits, use one or more of the optional activities listed on the following page to conclude the unit.

OPTIONAL ACTIVITIES:

1. Class Measurement Activities:

Obtain a meter stick or tape, a metric ruler, a liter container, and kilogram weight. Also, have a hard paper cup, potatoes, etc. Have students make approximate measurements.

(1) Measure the big stride or pace of a six-foot student or adult. It should be close to a meter.

(2) Use a metric rule to measure the diameter of an aspirin or the width of the little finger tip. It should be close to (1) one centimeter or 10 millimeters.

(3) Measure the width of the four finger tips pressed together. It will be close to 40-50 millimeters.

(4) Measure the height in meters and centimeters of eight or ten students. Have them each note their height; then estimate the height of other students, followed by actual measurements. Students should begin relating meters and centimeters to human beings.

(5) Have students walk (or ride a bike) a kilometer and note their time.

(6) Have students record temperatures by means of centigrade or Celsius thermometer.

2. Have students explain the metric units of measures that would be used in carrying out each of the following projects:

Baking a cake	Sewing
Art project	Constructing scale models
Time/distance chart	Height/weight chart

3. Have students explain how the change to the metric system will affect them in their daily lives in terms of school, work, play, diet, and so forth.

4. Discuss with students the social changes brought about by changing to the metric system; for example:

- older citizens adapting to the system
- learning the economics of the system or cost according to size
- changes in recording systems
- disorientation of persons with a lack of an understanding of the metric unit

5. Have the students tell which units of metric measurement would be used in:

   a. purchasing bread, butter, meat, and other foods sold by weight
   b. purchasing beverages such as milk, cola, orange juice, coffee, and tea
   c. measuring heights of people
   d. setting such traffic regulations as speed limits
   e. describing headgear sizes

6. Ask students to tell which of the following systems will be affected by changing to the metric system?

   a. time
   b. money
   c. temperature
   d. linear measurements:
      dimensions (ex. classroom size)
      distance (ex. between cities)
   e. weights
   f. speed
   g. electrical current
   h. growth rate
   i. age
   j. calendar measure
   k. volume
   l. scientific measures:
      pressure
      velocity
      power
      density
      light

   Ask students whether they can think of any measures that will be affected by the metric system other than those listed above.

BACKGROUND STORY ON INFORMATION SPECIALISTS

An information specialist (sometimes known as an information clerk) performs a variety of important functions as listed below:

- *Answers questions related to the department or the organization in which he/she works*
- *Finds information in files to answer questions*
- *Gives or sends leaflets to persons requesting information*
- *Talks with people in person or on the telephone to obtain needed information to answer questions*
- *Puts information into files in order to be able to refer to it as needed*

All of the above work may require basic office knowledge, but the important functions of the information specialist are to provide accurate and useful information to those requesting it and to obtain it when it is not readily available. Furthermore, they perform a vital public relations function of being particularly helpful to persons outside the business or organization.

Other basic office knowledge and skills include answering the telephone, obtaining the purpose of the visit from those who call in person, typing, filing, and so on.

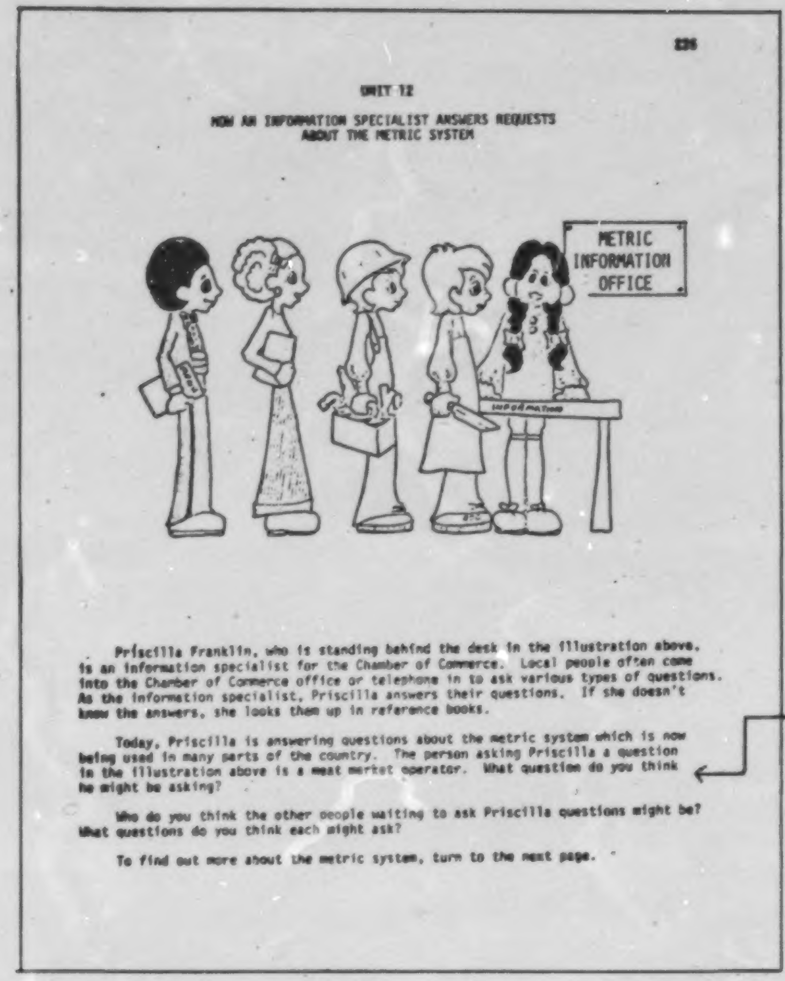
These jobs often provide interesting opportunities for employees who like to talk with and be helpful to people. An information specialist tends to be an unusually inquisitive person who asks a lot of questions and enjoys giving other people accurate, detailed, and useful information. The successful information specialist knows how to ask enough questions of a caller to find out exactly what is wanted. Frequently callers do not have a clear idea of what they want or know how themselves to ask the right questions. Therefore, the information specialist must courteously ask enough questions to be able to provide useful, accurate, and complete answers because the caller's first impression of the helpfulness of the organization is obtained from his/her first call. Nearly everyone in business and office occupations performs some of the duties that an information specialist does, but in large organizations these duties are handed over to one or more persons depending on the number of departments. Most of the calls will be referred to the information specialist by a receptionist. In some cases, the receptionist performs the functions of an information specialist.

The job of information specialist is found in large businesses, industries, and governmental units. Frequently, beginning office employees move into the job as soon as they have learned a great deal about the company or organization. The job pays according to experience and background of the employee and the amount of pay is in line with other office work.

KEY - UNIT 12

HOW AN INFORMATION SPECIALIST ANSWERS REQUESTS ABOUT THE METRIC SYSTEM

Introductory Page of Student Packet:



UNIT 12

HOW AN INFORMATION SPECIALIST ANSWERS REQUESTS ABOUT THE METRIC SYSTEM

Priscilla Franklin, who is standing behind the desk in the illustration above, is an information specialist for the Chamber of Commerce. Local people often come into the Chamber of Commerce office or telephone in to ask various types of questions. As the information specialist, Priscilla answers their questions. If she doesn't know the answers, she looks them up in reference books.

Today, Priscilla is answering questions about the metric system which is now being used in many parts of the country. The person asking Priscilla a question in the illustration above is a meat market operator. What question do you think he might be asking?

Who do you think the other people waiting to ask Priscilla questions might be? What questions do you think each might ask?

To find out more about the metric system, turn to the next page.

SAMPLE ANSWERS

How to weigh meat in the metric system, how much hamburger in kilograms to sell a customer who wants to serve a family of four for dinner, etc.

A carpenter, construction worker, etc., asking how the metric system applies to lengths of lumber, areas of floors, sizes of plywood, etc.

A housewife, mother, etc., asking how many kilograms of dry beans she should buy in order to serve two adults and one child.

A head waiter, waiter, restaurant manager, etc., asking how much coffee in liters to prepare daily to serve 200 customers.

As you discuss the packet introductory page with students, supplement the discussion with information from page 227, "Background Story on Information Specialists."

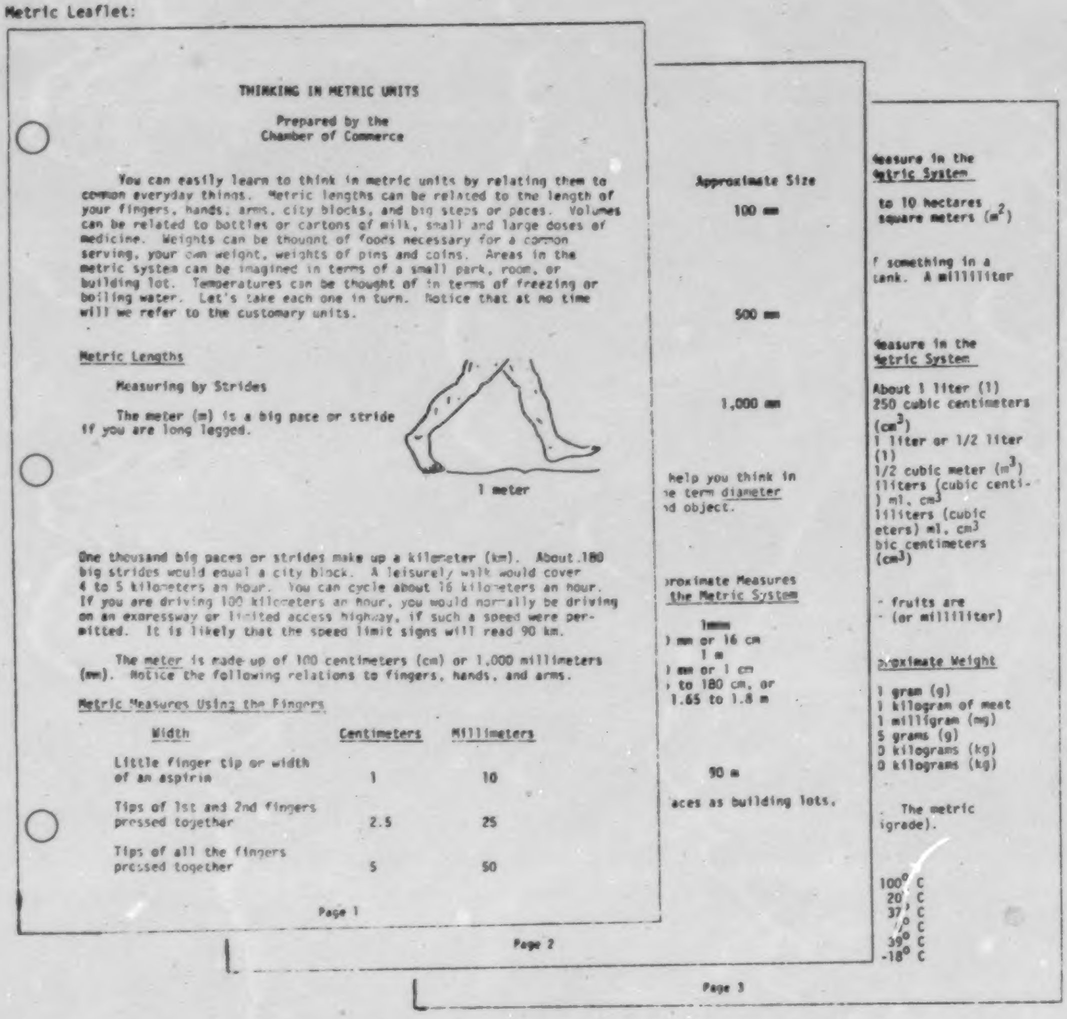
If some of your students are acquainted with people who are information specialists or information clerks, ask them to describe some of the tasks performed by these people and to tell in what types of organizations they work.

KEY - UNIT 12

METRIC LEAFLET

Activity 1:

Metric Leaflet:



THINKING IN METRIC UNITS

Prepared by the
Chamber of Commerce

You can easily learn to think in metric units by relating them to common everyday things. Metric lengths can be related to the length of your fingers, hands, arms, city blocks, and big steps or paces. Volumes can be related to bottles or cartons of milk, small and large doses of medicine. Weights can be thought of foods necessary for a common serving, your own weight, weights of pins and coins. Areas in the metric system can be imagined in terms of a small park, room, or building lot. Temperatures can be thought of in terms of freezing or boiling water. Let's take each one in turn. Notice that at no time will we refer to the customary units.

Metric Lengths

Measuring by Strides

The meter (m) is a big pace or stride if you are long legged.

One thousand big paces or strides make up a kilometer (km). About 180 big strides would equal a city block. A leisurely walk would cover 4 to 5 kilometers an hour. You can cycle about 16 kilometers an hour. If you are driving 100 kilometers an hour, you would normally be driving on an expressway or limited access highway, if such a speed were permitted. It is likely that the speed limit signs will read 90 km.

The meter is made up of 100 centimeters (cm) or 1,000 millimeters (mm). Notice the following relations to fingers, hands, and arms.

Metric Measures Using the Fingers

Width	Centimeters	Millimeters
Little finger tip or width of an aspirin	1	10
Tips of 1st and 2nd fingers pressed together	2.5	25
Tips of all the fingers pressed together	5	50

Page 1

Approximate Size
100 mm
500 mm
1,000 mm

help you think in
ne term diameter
nd object.

proximate Measures
the Metric System

1mm
) mm or 16 cm
1 m
) mm or 1 cm
, to 180 cm, or
1.65 to 1.8 m

90 m

aces as building lots.

Page 2

Measure in the
Metric System

to 10 hectares
square meters (m^2)

f something in a
tank. A milliliter

Measure in the
Metric System

About 1 liter (l)
250 cubic centimeters
(cm^3)
1 liter or 1/2 liter
(l)
1/2 cubic meter (m^3)
liters (cubic centi-
) ml, cm^3
lliters (cubic
eters) ml, cm^3
bic centimeters
(cm^3)

- fruits are
- (or milliliter)

proximate Weight

1 gram (g)
1 kilogram of meat
1 milligram (mg)
5 grams (g)
0 kilograms (kg)
0 kilograms (kg)

. The metric
igrade).

100° C
20° C
37° C
0° C
39° C
-18° C

Page 3

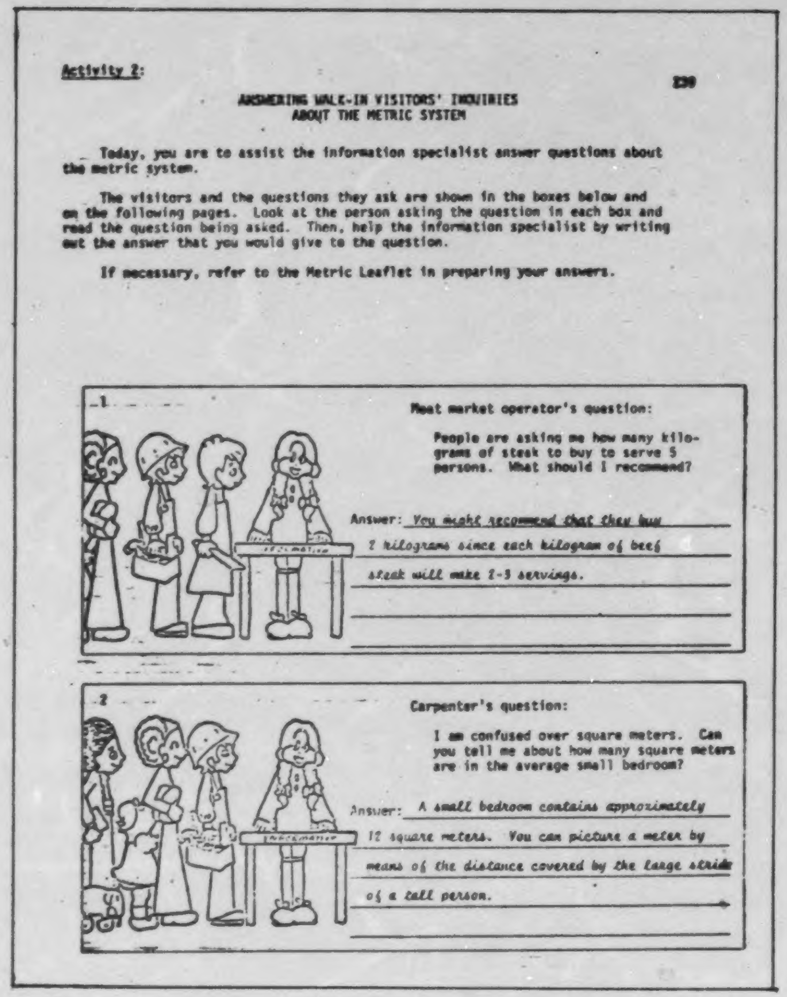
For this activity, students are to read the metric leaflet shown in the illustration above. They will then use the knowledge they acquire from this leaflet to answer questions in Activity 2.

The leaflet does not replace your regular math units on the metric system. The leaflet covers the new emphasis of Thinking Metrically in relation to everyday things and events; it stresses thinking rather than conversion to the regular measurement system. Conversion is a stop-gap device to be used while changing to the metric system. Of course, conversion should be taught also, but it is not covered here.

KEY - UNIT 12

ANSWERING QUESTIONS RELATED TO METRIC MEASUREMENTS

Activity 2:



Activity 2:

230

ANSWERING WALK-IN VISITORS' INQUIRIES ABOUT THE METRIC SYSTEM

Today, you are to assist the information specialist answer questions about the metric system.

The visitors and the questions they ask are shown in the boxes below and on the following pages. Look at the person asking the question in each box and read the question being asked. Then, help the information specialist by writing out the answer that you would give to the question.

If necessary, refer to the Metric Leaflet in preparing your answers.

1

Meat market operator's question:

People are asking me how many kilograms of steak to buy to serve 5 persons. What should I recommend?

Answer: *You might recommend that they buy 2 kilograms since each kilogram of beef steak will make 2-3 servings.*

2

Carpenter's question:

I am confused over square meters. Can you tell me about how many square meters are in the average small bedroom?

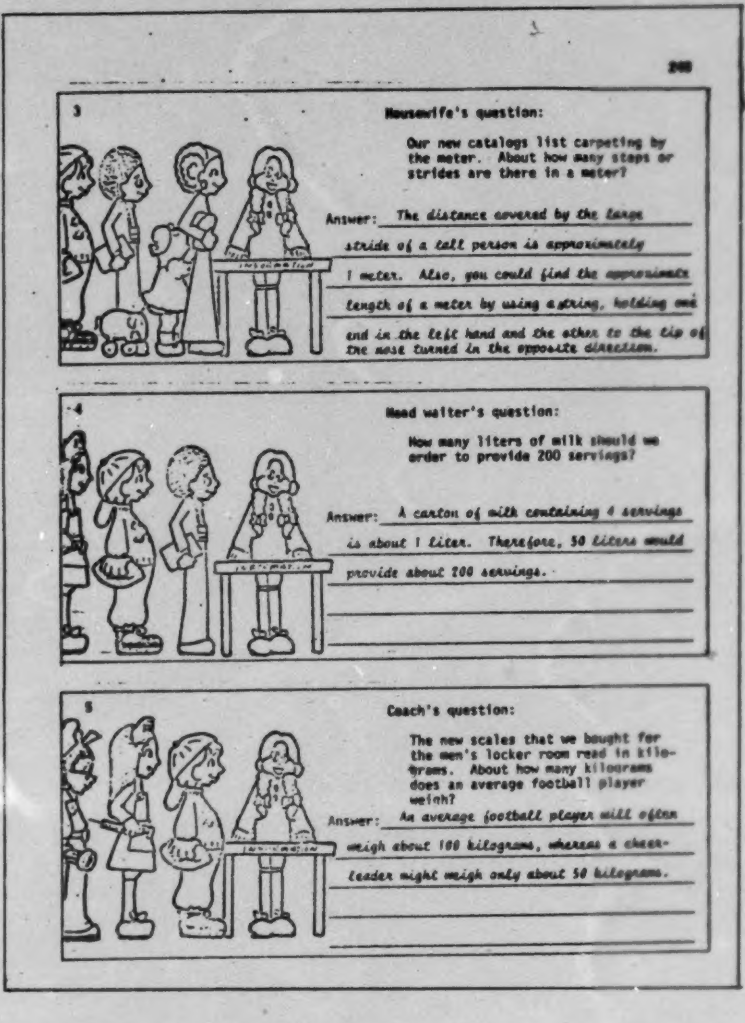
Answer: *A small bedroom contains approximately 12 square meters. You can picture a meter by means of the distance covered by the large stride of a tall person.*

Students, who are taking the role of information specialists, will use their copies of the metric leaflet to answer questions posed to them. For the teacher's convenience, samples answers that the student "Information Specialists" should give are shown above and on the following pages.

KEY - UNIT 12

ANSWERING QUESTIONS RELATED TO METRIC MEASUREMENTS

Activity 2 (continued):



3

Housewife's question:

Our new catalogs list carpeting by the meter. About how many steps or strides are there in a meter?

Answer: *The distance covered by the large stride of a tall person is approximately 1 meter. Also, you could find the approximate length of a meter by using a string, holding one end in the left hand and the other to the tip of the nose turned in the opposite direction.*

4

Head waiter's question:

How many liters of milk should we order to provide 200 servings?

Answer: *A carton of milk containing 4 servings is about 1 liter. Therefore, 50 liters would provide about 200 servings.*

5

Coach's question:

The new scales that we bought for the men's locker room read in kilograms. About how many kilograms does an average football player weigh?

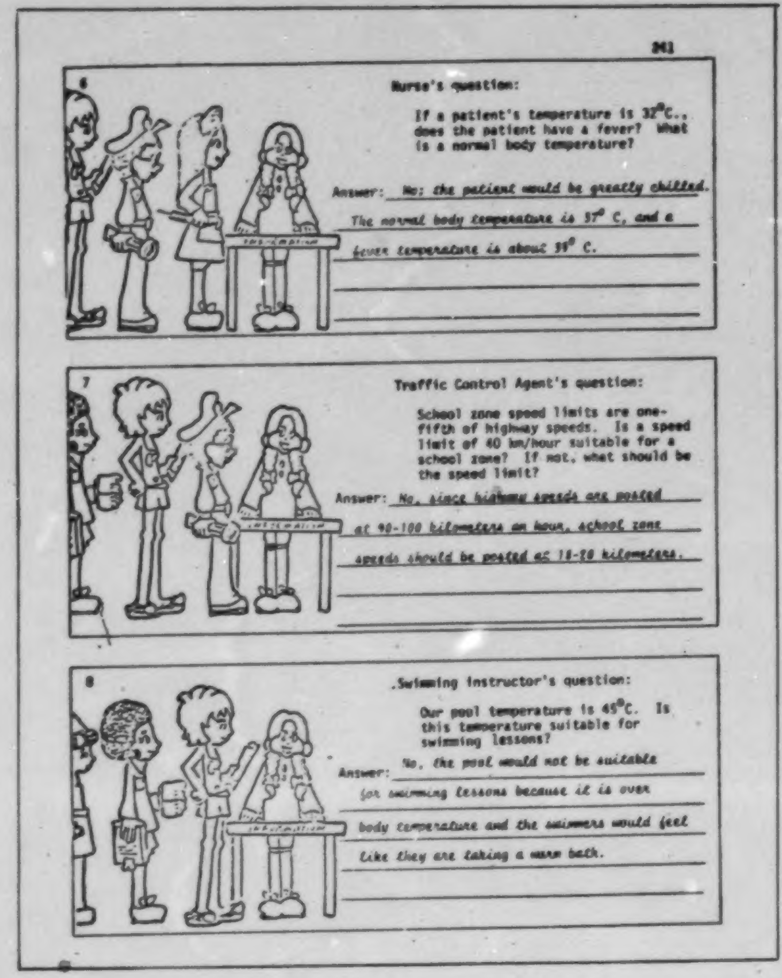
Answer: *An average football player will often weigh about 100 kilograms, whereas a cheerleader might weigh only about 50 kilograms.*

Sample answers that the student "Information Specialists" should give for questions 3-5 are shown in the above illustration.

KEY - UNIT 12

ANSWERING QUESTIONS RELATED TO METRIC MEASUREMENTS

Activity 2(continued):



241

6

Nurse's question:

If a patient's temperature is 32°C., does the patient have a fever? What is a normal body temperature?

Answer: *No; the patient would be greatly chilled. The normal body temperature is 37° C, and a fever temperature is about 39° C.*

7

Traffic Control Agent's question:

School zone speed limits are one-fifth of highway speeds. Is a speed limit of 40 km/hour suitable for a school zone? If not, what should be the speed limit?

Answer: *No, since highway speeds are posted at 90-100 kilometers an hour, school zone speeds should be posted at 18-20 kilometers.*

8

.Swimming instructor's question:

Our pool temperature is 45°C. Is this temperature suitable for swimming lessons?

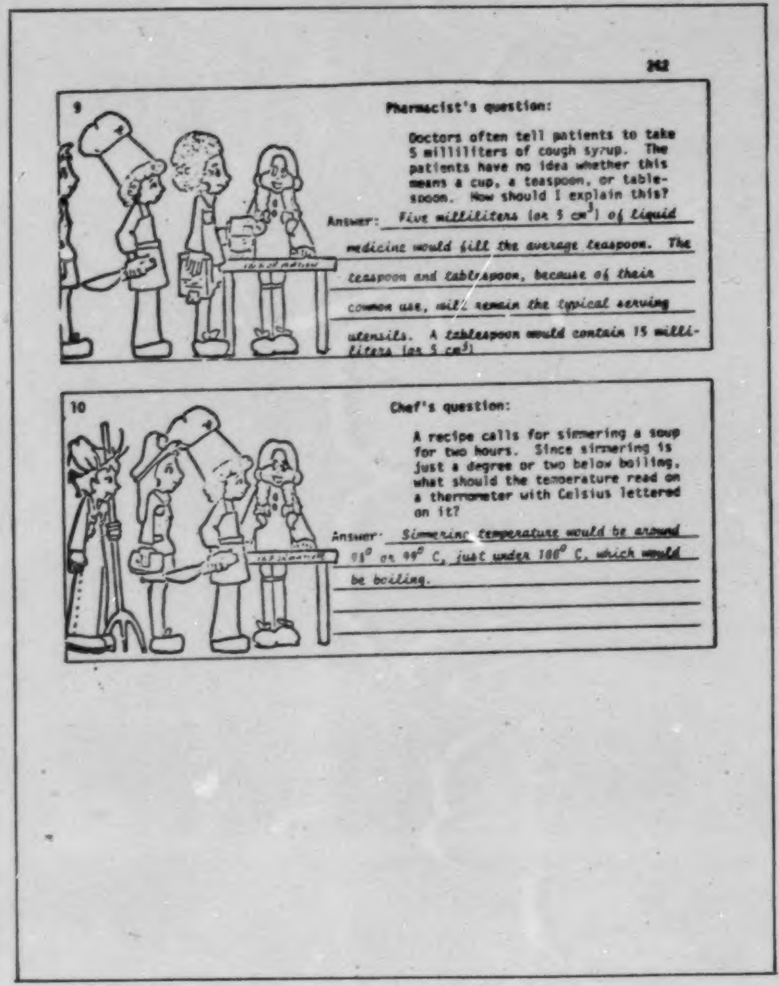
Answer: *No, the pool would not be suitable for swimming lessons because it is over body temperature and the swimmers would feel like they are taking a warm bath.*

Sample answers that the student "Information Specialists" should give for questions 6-8 are shown in the above illustration.

KEY - UNIT 12

ANSWERING QUESTIONS RELATED TO METRIC MEASUREMENTS

Activity 2 (continued):



242

9

Pharmacist's question:

Doctors often tell patients to take 5 milliliters of cough syrup. The patients have no idea whether this means a cup, a teaspoon, or tablespoon. How should I explain this?

Answer: *Five milliliters (or 5 cm^3) of liquid medicine would fill the average teaspoon. The teaspoon and tablespoon, because of their common use, will remain the typical serving utensils. A tablespoon would contain 15 milliliters (or 5 cm^3)*

10

Chef's question:

A recipe calls for simmering a soup for two hours. Since simmering is just a degree or two below boiling, what should the temperature read on a thermometer with Celsius lettered on it?

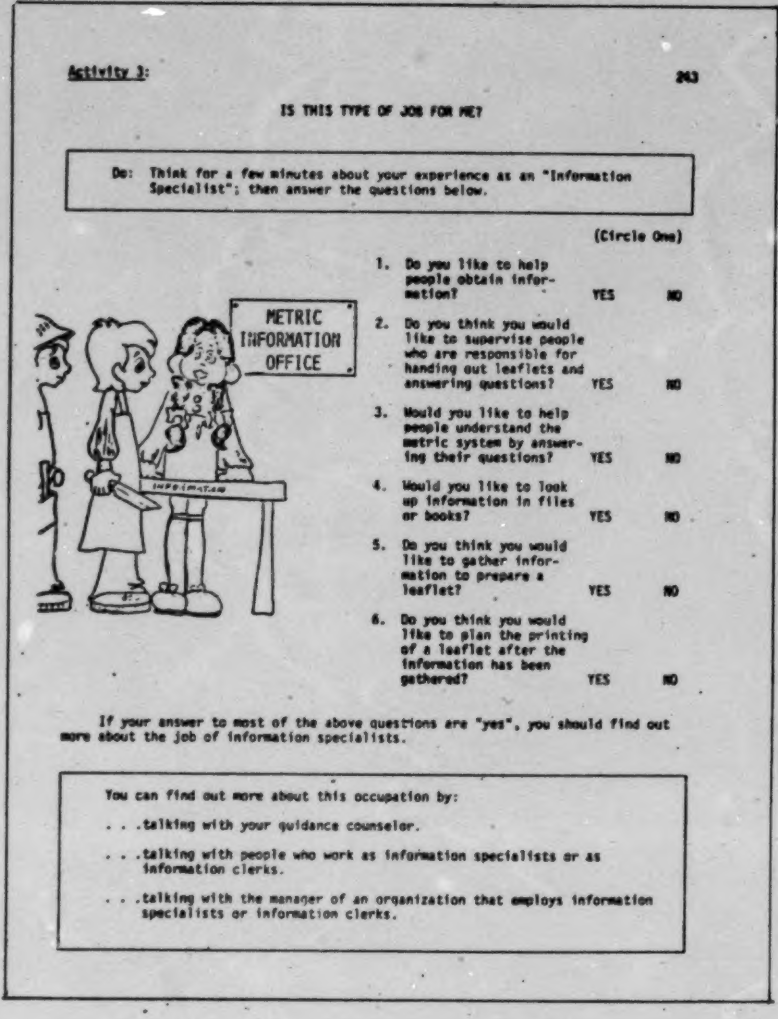
Answer: *Simmering temperature would be around 98° or 99° C, just under 100° C, which would be boiling.*

Sample answers that the student "Information Specialists" should give for questions 9-10 are shown in the above illustration.

KEY - UNIT 12

IS THIS TYPE OF JOB FOR ME?

Activity 3:


METRIC
INFORMATION
OFFICE
INFORMATION

Activity 3: 243

IS THIS TYPE OF JOB FOR ME?

Do: Think for a few minutes about your experience as an "Information Specialist"; then answer the questions below.

(Circle One)

1. Do you like to help people obtain information? YES NO
2. Do you think you would like to supervise people who are responsible for handing out leaflets and answering questions? YES NO
3. Would you like to help people understand the metric system by answering their questions? YES NO
4. Would you like to look up information in files or books? YES NO
5. Do you think you would like to gather information to prepare a leaflet? YES NO
6. Do you think you would like to plan the printing of a leaflet after the information has been gathered? YES NO

If your answer to most of the above questions are "yes", you should find out more about the job of information specialists.

You can find out more about this occupation by:

. . .talking with your guidance counselor.

. . .talking with people who work as information specialists or as information clerks.

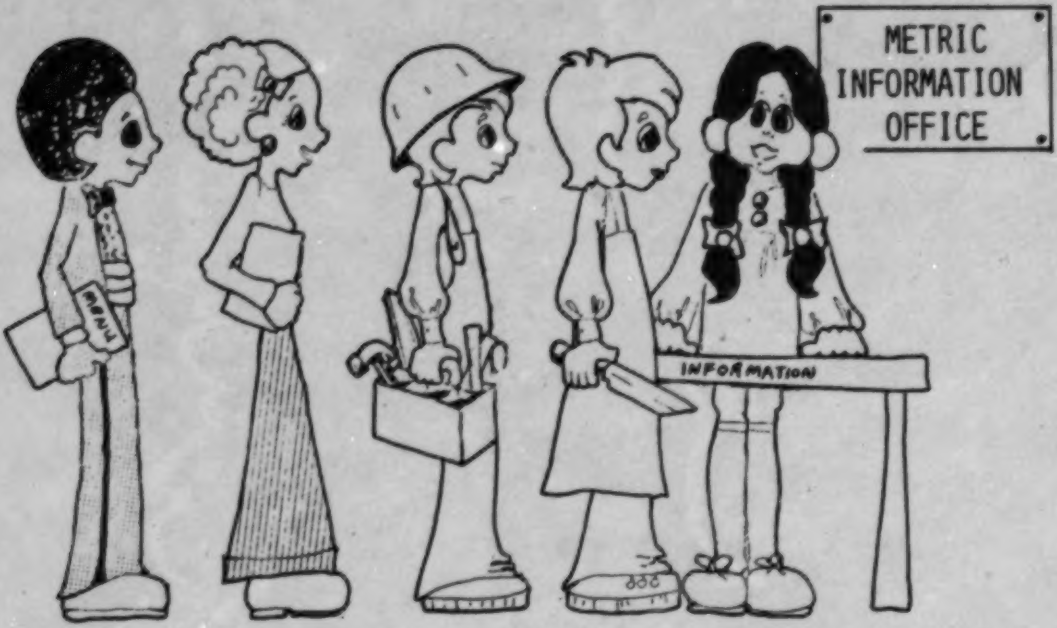
. . .talking with the manager of an organization that employs information specialists or information clerks.

Individual student response to the questions on this sheet will vary; however, after this brief unit, students should have some knowledge of the information specialist's job.

Call attention to the activities listed in the second "box" on this sheet and encourage interested students to seek more information by going to the sources mentioned.

UNIT 12

HOW AN INFORMATION SPECIALIST ANSWERS REQUESTS ABOUT THE METRIC SYSTEM



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Today, Priscilla is answering questions about the metric system which is now being used in many parts of the country. The person asking Priscilla a question in the illustration above is a meat market operator. What question do you think he might be asking?

Who do you think the other people waiting to ask Priscilla questions might be? What questions do you think each might ask?

To find out more about the metric system, turn to the next page.

Activity 1:

THINKING IN METRIC UNITS

Today, you will help the information specialist answer questions about the metric system. In order to prepare yourself for this job, read the three-page metric leaflet which is shown below and on the following two pages. Then go to page 239 and begin your job as assistant to the information specialist.

Metric Leaflet:

THINKING IN METRIC UNITS

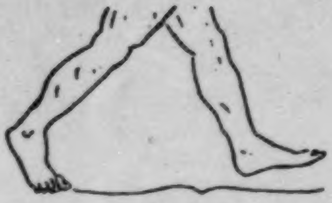
Prepared by the
Chamber of Commerce

You can easily learn to think in metric units by relating them to common everyday things. Metric lengths can be related to the length of your fingers, hands, arms, city blocks, and big steps or paces. Volumes can be related to bottles or cartons of milk, small and large doses of medicine. Weights can be thought of foods necessary for a common serving, your own weight, weights of pins and coins. Areas in the metric system can be imagined in terms of a small park, room, or building lot. Temperatures can be thought of in terms of freezing or boiling water. Let's take each one in turn. Notice that at no time will we refer to the customary units.

Metric Lengths

Measuring by Strides

The meter (m) is a big pace or stride if you are long legged.



1 meter

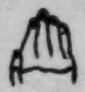
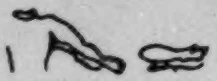
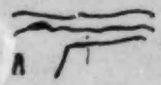
One thousand big paces or strides make up a kilometer (km). About 180 big strides would equal a city block. A leisurely walk would cover 4 to 5 kilometers an hour. You can cycle about 16 kilometers an hour. If you are driving 100 kilometers an hour, you would normally be driving on an expressway or limited access highway, if such a speed were permitted. It is likely that the speed limit signs will read 90 km.

The meter is made up of 100 centimeters (cm) or 1,000 millimeters (mm). Notice the following relations to fingers, hands, and arms.

Metric Measures Using the Fingers

Width	Centimeters	Millimeters
Little finger tip or width of an aspirin	1	10
Tips of 1st and 2nd fingers pressed together	2.5	25
Tips of all the fingers pressed together	5	50

Metric Measures Using the Hands

		Approximate Size
	Width of hand from thumb knuckle to side	100 mm
	From armpit to wrist of hand, or from elbow to fingertips	500 mm
	From left shoulder to tip of right hand	1,000 mm

Other comparisons of common things that will help you think in metric measures are shown below. Remember that the term diameter is used to measure the width of a circular or round object.

Common Examples of Widths in Metric Units

Diameter	Approximate Measures in the Metric System
Diameter of a needle	1mm
Diameter of your head	160 mm or 16 cm
Diameter of the trunk of a shade tree	1 m
Diameter of an aspirin	10 mm or 1 cm
Your height	165 to 180 cm, or 1.65 to 1.8 m

Length

Football field	90 m

Area is a term used to refer to surfaces surfaces as building lots, parks, floors, circular flower beds.

Areas of Surfaces

Area	Measure in the Metric System
Large City Park	5 to 10 hectares
Small Bedroom	12 square meters (m^2)

Volume is a term used to refer to the amount of something in a bottle, box, teaspoon, carton, or gasoline storage tank. A milliliter is equal to a cubic centimeter.

Visualizing Volumes in Metric Units

Volume	Measure in the Metric System
Carton of milk containing 4 servings	About 1 liter (l)
A serving of coffee	About 250 cubic centimeters (cm^3)
A box of raspberries	About 1 liter or 1/2 liter (l)
A bath tub of water	About 1/2 cubic meter (m^3)
A small dose of liquid medicine	5 milliliters (cubic centimeters) ml, cm^3
A large dose of liquid medicine	15 milliliters (cubic centimeters) ml, cm^3
A large soft drink	500 cubic centimeters (cm^3)

Weight is a term used when meat, vegetables, or fruits are measured on the grocer's scales. A cubic centimeter (or milliliter) of water weighs about one gram.

Weight	Approximate Weight
10 straight pins	1 gram (g)
2 or 3 servings of beef steak	1 kilogram of meat
A grain of salt	1 milligram (mg)
A nickel	5 grams (g)
A football player	100 kilograms (kg)
A cheer leader	50 kilograms (kg)

Temperature is a measure of coldness or warmth. The metric measure for temperature is degrees of Celsius (centigrade).

Temperature	
Water boils	100^{o} C
Room temperature	20^{o} C
Normal body temperature	37^{o} C
Freezing water	0^{o} C
Flu temperature	39^{o} C
Very cold winter day	-18^{o} C

Activity 2:

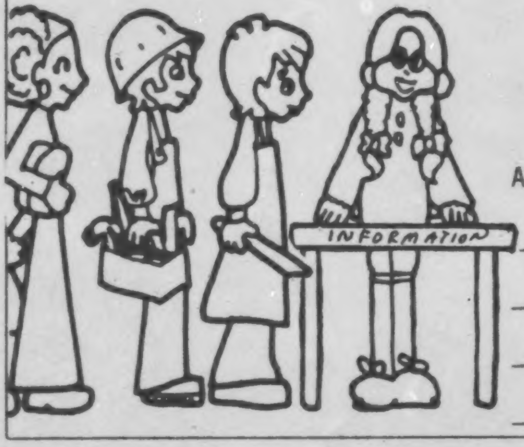
ANSWERING WALK-IN VISITORS' INQUIRIES ABOUT THE METRIC SYSTEM

Today, you are to assist the information specialist answer questions about the metric system.

The visitors and the questions they ask are shown in the boxes below and on the following pages. Look at the person asking the question in each box and read the question being asked. Then, help the information specialist by writing out the answer that you would give to the question.

If necessary, refer to the Metric Leaflet in preparing your answers.

1



Meat market operator's question:

People are asking me how many kilograms of steak to buy to serve 5 persons. What should I recommend?

Answer: ______________________________

____

____

____

____

2

INFORMATION

Carpenter's question:

I am confused over square meters. Can you tell me about how many square meters are in the average small bedroom?

Answer: ______________________________

____

____

____

____

3

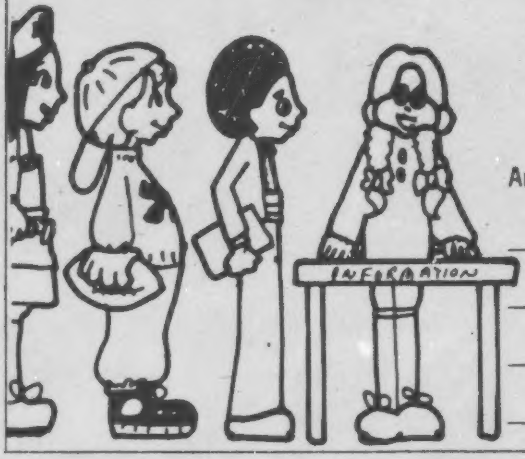
INFORMATION

Housewife's question:

Our new catalogs list carpeting by the meter. About how many steps or strides are there in a meter?

Answer:

4

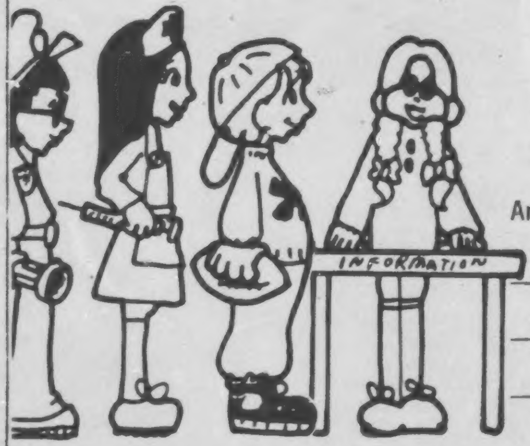


Head waiter's question:

How many liters of milk should we order to provide 200 servings?

Answer:

5

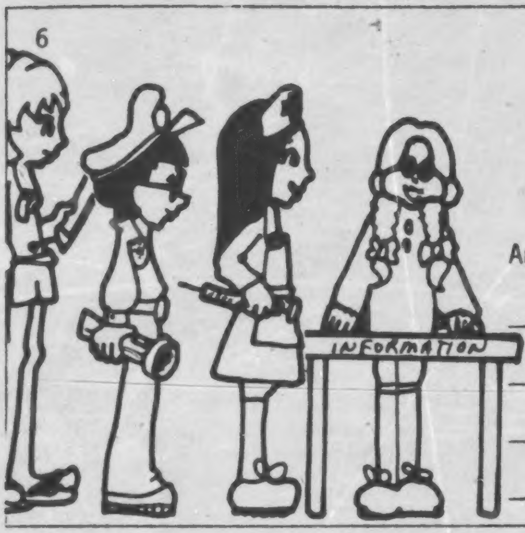


Coach's question:

The new scales that we bought for the men's locker room read in kilograms. Abcut how many kilograms does an average football player weigh?

Answer:

6

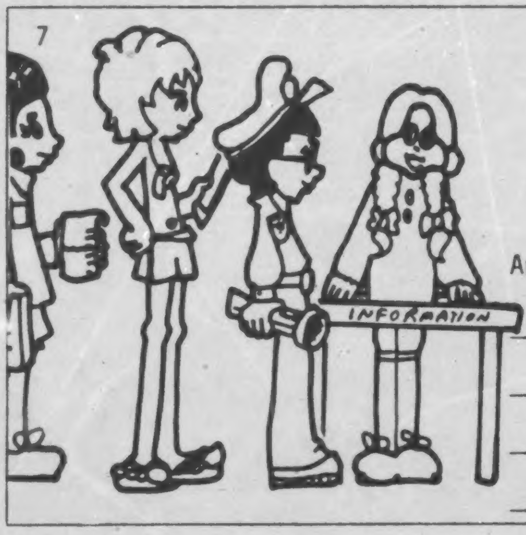


Nurse's question:

If a patient's temperature is 32°C., does the patient have a fever? What is a normal body temperature?

Answer:

7

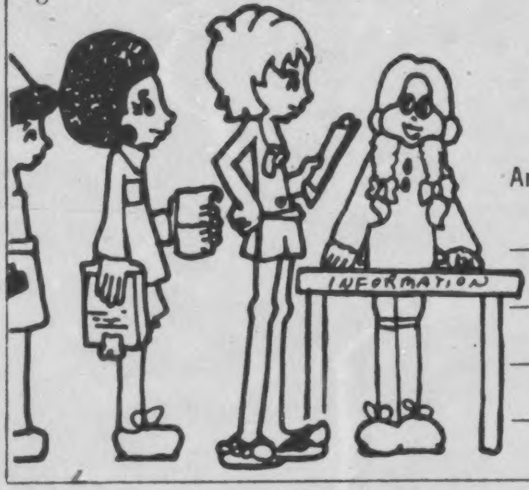


Traffic Control Agent's question:

School zone speed limits are one-fifth of highway speeds. Is a speed limit of 40 km/hour suitable for a school zone? If not, what should be the speed limit?

Answer:

8

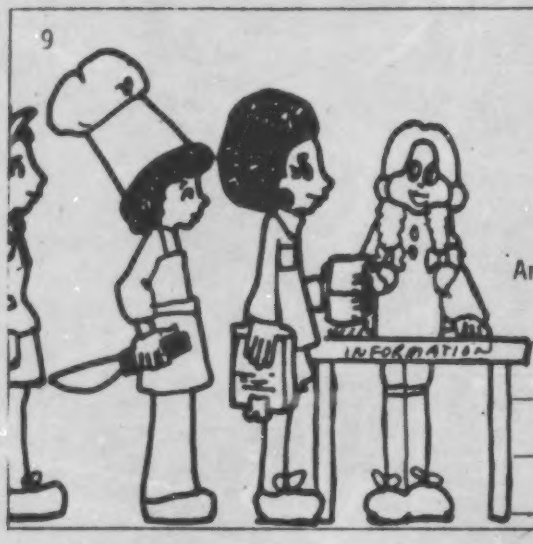


Swimming instructor's question:

Our pool temperature is 45°C. Is this temperature suitable for swimming lessons?

Answer:

9

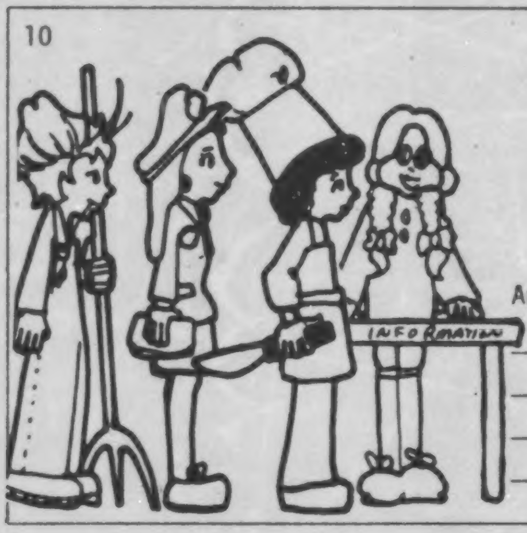


Pharmacist's question:

Doctors often tell patients to take 5 milliliters of cough syrup. The patients have no idea whether this means a cup, a teaspoon, or tablespoon. How should I explain this?

Answer: ____________________

10



Chef's question:

A recipe calls for simmering a soup for two hours. Since simmering is just a degree or two below boiling, what should the temperature read on a thermometer with Celsius lettered on it?

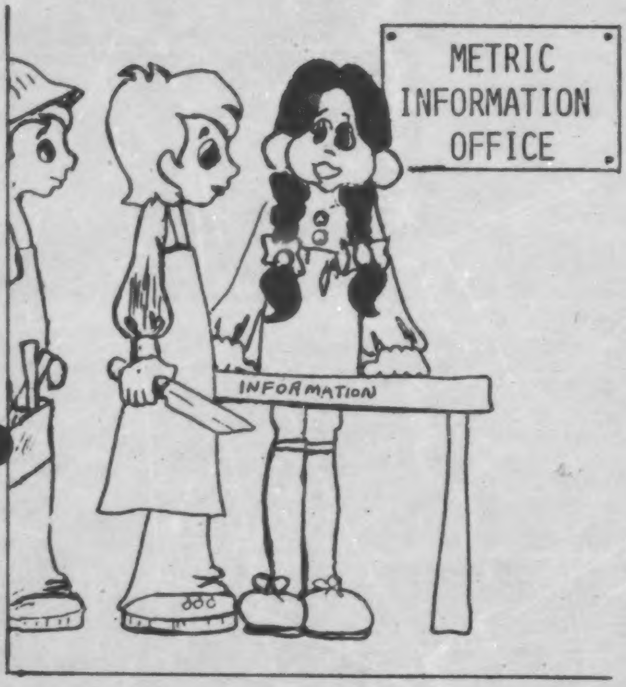
Answer: ____________________

Who do you think the last two people in the line above are? What types of questions might they be asking?

IS THIS TYPE OF JOB FOR ME?

Do: Think for a few minutes about your experience as an "Information Specialist"; then answer the questions below.

(Circle One)



1. Do you like to help people obtain information? YES NO
2. Do you think you would like to supervise people who are responsible for handing out leaflets and answering questions? YES NO
3. Would you like to help people understand the metric system by answering their questions? YES NO
4. Would you like to look up information in files or books? YES NO
5. Do you think you would like to gather information to prepare a leaflet? YES NO
6. Do you think you would like to plan the printing of a leaflet after the information has been gathered? YES NO

If your answer to most of the above questions are "yes", you should find out more about the job of information specialists.

You can find out more about this occupation by:

. . .talking with your guidance counselor.

. . .talking with people who work as information specialists or as information clerks.

. . .talking with the manager of an organization that employs information specialists or information clerks.

UNIT 13

HOW THE OWNER-MANAGER OF A DRY CLEANING SHOP USES EQUATIONS TO PLAN FOR AN INCREASE IN CASH FLOW

PURPOSE:

This unit concentrates on a mathematics component of the career of an owner-manager of a dry cleaning shop and how this person, the accountant, and the advertising manager work together as a team.

MAJOR ACTIVITIES:

As students work through the activities of this unit, they will use equations to compute an actual and an estimated cash flow for the dry cleaning shop, and they will use formulas to determine how the cash flow might be increased.

Suggestion: With some classes, it may be necessary to work on the various activities as a group, since so many career concepts are introduced.

Before Class Begins:

1. Be sure students are able to solve equations and are at the stage of wanting to know how they are used in everyday affairs.
2. Make transparencies or duplicate a class set of the illustrations on pages 256 through 259.
3. Duplicate the student materials which begin on page 260.
4. Read the "General Information About Owner-Managers" which is on page 249.

During Class:

1. Distribute the sets of student activities. Have students read the introductory information on page 260, then have them turn the packets face down on their desks.
2. Project the transparency, or have students look at their copies of Sketch "A"; then guide a class discussion which may include the following dialogue:

During Class:

2. (Continued)

Teacher: Sharon Gallegos is the owner-manager of a dry cleaning shop. Does she seem to be happy?

Class: *No. She seems troubled.*

Teacher: She is reading some reports prepared by her accountant and has found that the cash balance is declining. Why would this bother her?

Class: *(Among other comments) She won't be able to pay her bills and the wages and salaries of her employees if the cash balance continues to decline.*

Teacher: A business can be profitable, but still get into serious trouble if the cash balance delines every week. What do you think Sharon should do?

Class: *Talk to her accountant and other employees about increasing dry cleaning sales.*

3. Have students turn their packets face up, then work with them as a group as they complete Activity 1.

4. Have students look at Sketch "B," then guide a second discussion:

Teacher: Who is meeting with Sharon?

Class: *The advertising manager and probably the accountant.*

Teacher: What do you think they are talking about?

Class: *How to increase the cash balance (or cash flow).*

Teacher: What does the advertising manager have in his hands?

Class: *A copy of Advertising Age.*

Teacher: Let's look at page 263 to see how Sharon can increase the cash balance.

5. Have students read and discuss the information on page 263, then assist them as they complete the form on page 264.

6. Direct students' attention to Sketch "C," then guide a third discussion which may include the following:

Teacher: Sharon Gallegos is now having a discussion with her staff. Who is present?

Class: *The accountant and the advertising manager, as well as Sharon.*

During Class:

6. (Continued)

Teacher: What does the accountant have in her hand?

Class: A copy of Dry Cleaning News.

Teacher: Let's find out what is happening.

7. Have students read and discuss the information on page 265, then give them any needed assistance as they complete the form on page 266.

8. Direct students' attention to Sketch "D," then guide a fourth discussion:

Teacher: What do you think Sharon is doing now?

Class: Working on a cash flow problem?

Teacher: Does she appear happy or sad? Give a reason for your answer.

Class: Happy. She must have been able to plan an increase in her cash balance.

9. Have students read the information and complete the exercises on pages 267 and 268.

OPTIONAL ACTIVITIES:

1. GAME: TO TELL THE TRUTH

This game is similar to the one shown on TV. One person is to take the role of a "real manager" of a dry cleaning shop and should prepare to answer a variety of questions about its operations. Two other students are to attempt to answer the questions correctly, but will actually have "jobs" or "professions" such as policeman and plumber. From the answers given by each of the students, the class is to determine the identity of the "real manager."

Steps:
- a. Select three students or ask for volunteers to assume the roles of "real manager" and "impostors," then plan with them separately so that the identity of the "real manager" will not be known to the class.
- b. Have the three students prepare to answer a variety of questions about managing a dry cleaning business.
- c. Have the "real manager" visit a dry cleaning shop in order to obtain "authentic" information. The form on the next page may be used as a guide.

OPTIONAL ACTIVITIES:

1. GAME: TO TELL THE TRUTH

Steps: c. (Continued)

INTERVIEW GUIDE

(1) How did you get started in this business?

(2) How many employees do you supervise?

(3) What are some of the biggest problems in the dry cleaning business?

(4) What do you do when someone claims you did not return some of their clothes?

(5) Do you have a delivery service? How does it operate?

(6) How do you handle a garment that has been stained by a coke?

(7) What do you do when an employee is unpleasant with customers or fails to answer the telephone properly?

d. Select four students to act as a panel of "questioners."

e. When the "real manager" and two "impostors" are ready, have them face the class and state in unison, "I am the manager of Central Drycleaners."

f. Allow each questioner one minute in which to quiz the "managers."

g. Permit a second round of questions by each member on the panel.

h. Have the panel members vote on the identity of the "real manager" by writing the number assigned to the manager (1, 2, or 3) on a card.

i. Tabulate or announce the votes.

j. Have the "real manager" stand up.

k. Rewards: If all four questioners vote incorrectly, give the "managers" a gift such as a ball point pen. If three of the questioners vote incorrectly, give the managers an opportunity to do one less assigned problem.

l. Conduct a discussion as to the effectiveness of the entire process.

OPTIONAL ACTIVITIES: (CONTINUED)

2. GAME: WHICH ONE WOULD YOU HIRE

This game is similar to the "Dating Game" on TV, except that students are to choose the best qualified of three "employees" whom they will hear but will not see.

Steps:

a. Obtain three volunteers to apply for the job of manager of a bakery, restuarant, or some other small business. They will have to assume that they are 10 years older than they are now and have had some work experience in one or two positions.

b. Have each volunteer visit the business or read about it, obtaining such information as:

   (1) duties and responsibilities
   (2) qualifications
   (3) training required
   (4) hours of work

c. When they are ready, use a screen so that the three students will not be visible to the class.

d. Have one student take the role of interviewer.

e. The interviewer should direct questions to applicants 1, 2, and 3, such as:

   (1) What did you study in school?
   (2) What is your age?
   (3) What are your qualifications for this job?
   (4) What work experience have you had?
   (5) Do you have references?
   (6) What do you think the duties of this job are?
   (7) Do you like to work with people?
   (8) Do you think customers will want to do business with you? Why?
   (9) Do you think you can encourage and inspire employees to do a good job?

   As the "applicants" answer these questions, it may be necessary for them to disguise their voices.

f. Allow 5-8 minutes for the entire interview.

g. Have the interviewer select the best qualified applicant.

h. Have the class discuss the effectiveness of the interview and the final choice.

GENERAL INFORMATION ABOUT OWNER-MANAGERS

The owner of a business is the person who is legally responsible and who actually owns it. The manager, employed by the owner, is the person who operates the business for the owner by hiring and discharging people, buying supplies, taking in cash, handling the bank account, and so on. In many businesses, the owner and the manager are the same person. Let's examine the dual function:

How Do Owner-Managers Get Started?

First, they select a business operation with which they are familiar and experienced. They investigate the likelihood of competition, and they choose a location. Then, they raise some money to get started by investing their own cash and often by borrowing additional money. They buy or rent a building and buy goods to sell if they are planning to operate a merchandising business. If they plan to operate a service business, such as the dry cleaning business described in this unit, they purchase supplies and equipment.

All new business-owners must advertise, hire employees, open bank accounts, and plan for other types of activities. They usually must obtain a license to operate and must always meet local, state, and federal ordinances and laws. Of prime importance, they must set up an office to handle purchases, sales, collections, and reports.

Owner-managers are their own bosses and have to answer to no one. They usually learn the operation of a business by working for someone else. Sharon Gallegos, who is the owner-manager mentioned in this unit, got her start by working in her parents' dry cleaning shop.

A person who is successful in owning and operating a business often has the following characteristics:

1. A willingness to work hard
2. A willingness to take risks
3. An ability to make friends with customers
4. An ability to motivate employees to do a good job

Other qualifications directly related to the needs of business include:

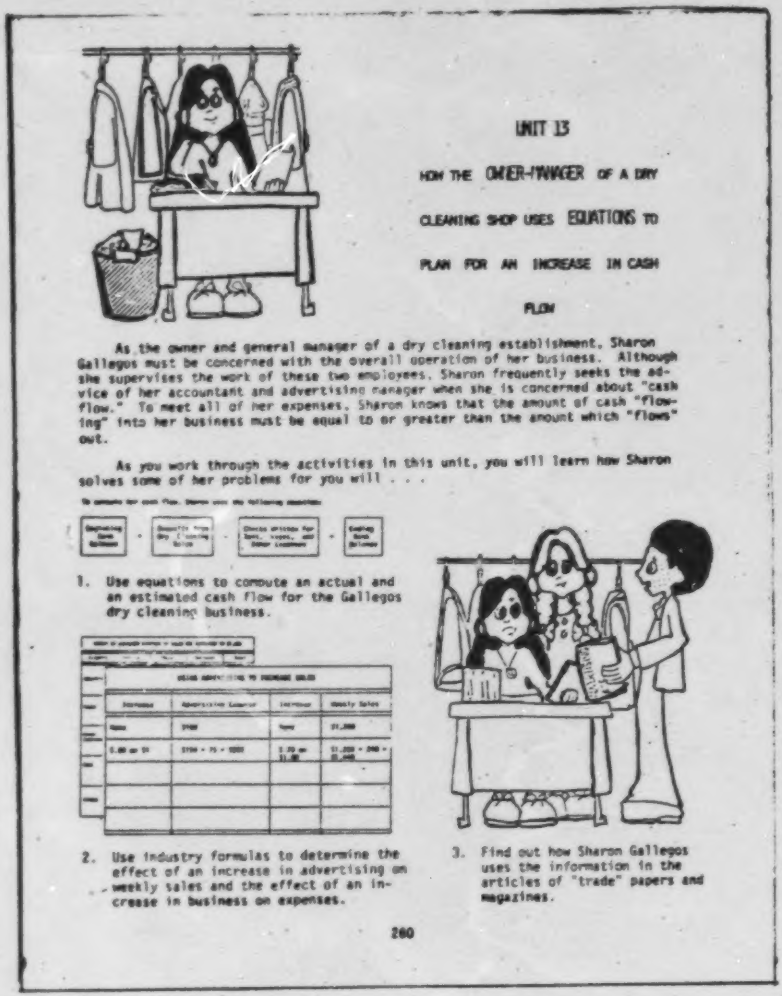
1. An ability to raise capital (money)
2. Successful experience in working in similar businesses
3. Mental ability to work on a number of activities during the same time span.
4. Physical capacity to work under pressure.

There are millions of small businesses, and it is expected that even larger numbers will be needed as the American economy grows. The retailing of goods and services provides some of the best opportunities for young people to get started as owner-managers.

KEY - UNIT 13

HOW THE OWNER-MANAGER OF A DRY CLEANING SHOP USES EQUATIONS TO PLAN FOR AN INCREASE IN CASH FLOW

Introductory Page of Student Packet:



UNIT 13

HOW THE OWNER-MANAGER OF A DRY CLEANING SHOP USES EQUATIONS TO PLAN FOR AN INCREASE IN CASH FLOW

As the owner and general manager of a dry cleaning establishment, Sharon Gallegos must be concerned with the overall operation of her business. Although she supervises the work of these two employees, Sharon frequently seeks the advice of her accountant and advertising manager when she is concerned about "cash flow." To meet all of her expenses, Sharon knows that the amount of cash "flowing" into her business must be equal to or greater than the amount which "flows" out.

As you work through the activities in this unit, you will learn how Sharon solves some of her problems for you will . . .

1. Use equations to compute an actual and an estimated cash flow for the Gallegos dry cleaning business.

2. Use industry formulas to determine the effect of an increase in advertising on weekly sales and the effect of an increase in business on expenses.

3. Find out how Sharon Gallegos uses the information in the articles of "trade" papers and magazines.

260

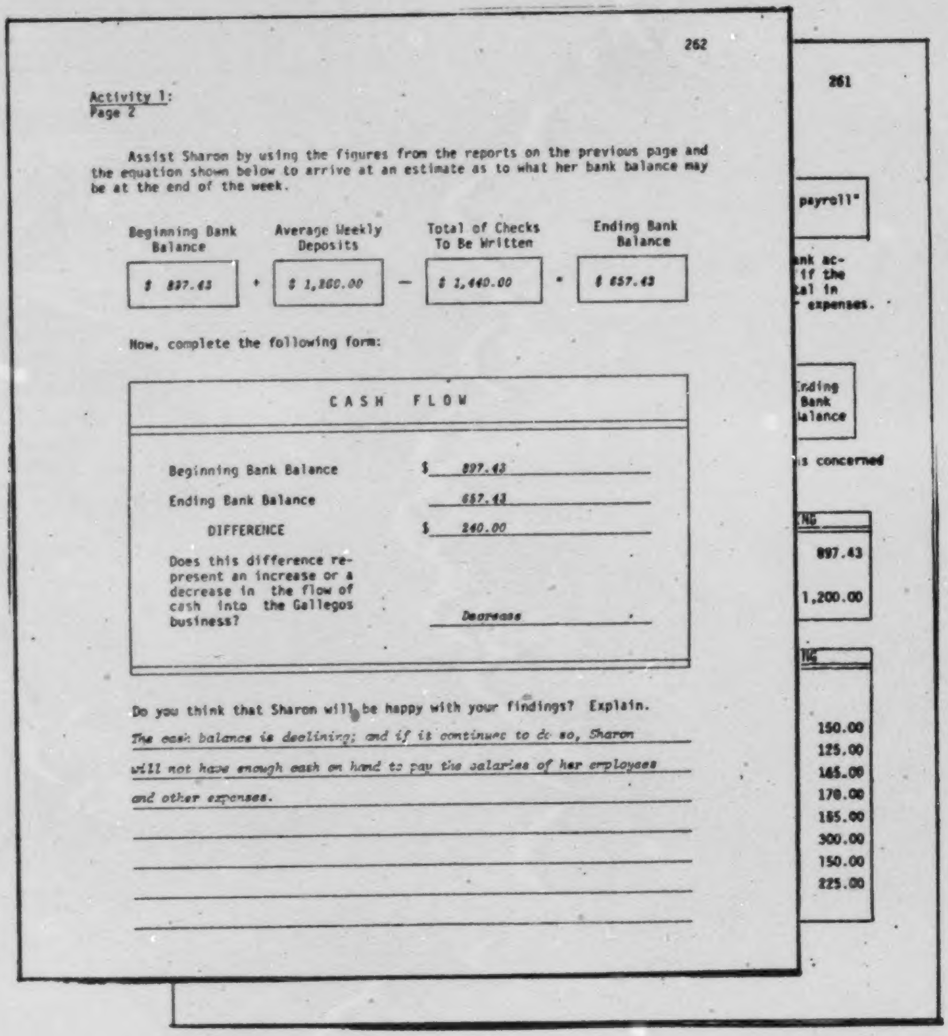
Following the presentation of the illustration on page 256 and the accompanying discussion, your students should read through the information on the above sheet.

Before beginning their work on Activity 1, you should have your students briefly discuss the meaning of "trade" papers and magazines. *(These are papers and magazines which are published primarily for members of a particular industry or profession.)*

KEY - UNIT 13

USING AN EQUATION TO COMPUTE CASH FLOW

Activity 1:



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300.00
150.00
225.00

262

Activity 1:
Page 2

Assist Sharon by using the figures from the reports on the previous page and the equation shown below to arrive at an estimate as to what her bank balance may be at the end of the week.

Beginning Bank Balance		Average Weekly Deposits		Total of Checks To Be Written		Ending Bank Balance
$ 897.43	+	$ 1,200.00	—	$ 1,440.00	=	$ 657.43

Now, complete the following form:

CASH FLOW

Beginning Bank Balance	$ 897.43
Ending Bank Balance	657.43
DIFFERENCE	$ 240.00
Does this difference represent an increase or a decrease in the flow of cash into the Gallegos business?	Decrease

Do you think that Sharon will be happy with your findings? Explain.

The cash balance is declining; and if it continues to do so, Sharon will not have enough cash on hand to pay the salaries of her employees and other expenses.

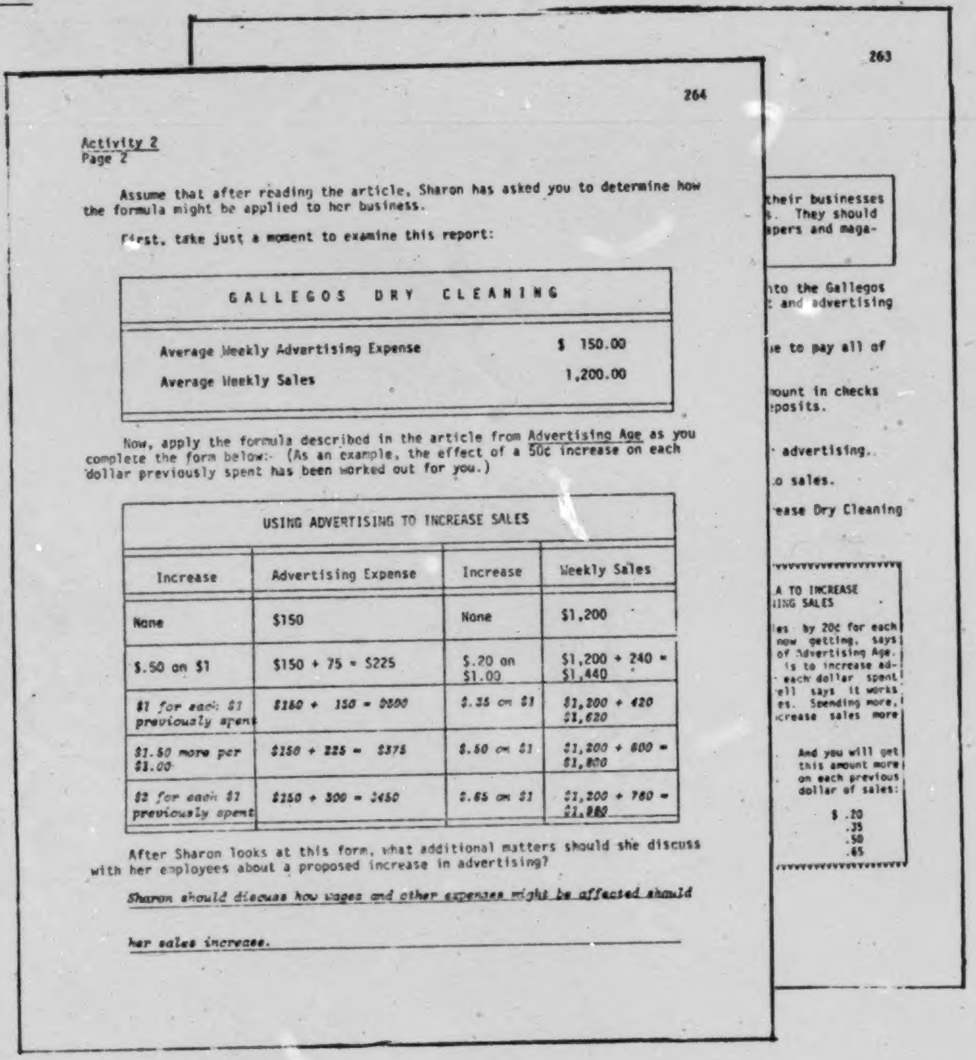
To correctly complete the forms on this page, your students will need to study the equation and other information on page 261; then they must enter the figures in the appropriate boxes and spaces on page 262.

After checking the answers to the equation and cash flow problem on page 262, you may want to have your students orally react to the question on the bottom of this page.

KEY - UNIT 13

PLANNING TO INCREASE SALES BY MEANS OF INDUSTRY FORMULAS

Activity 2:



Activity 2
Page 2

Assume that after reading the article, Sharon has asked you to determine how the formula might be applied to her business.

First, take just a moment to examine this report:

GALLEGOS DRY CLEANING	
Average Weekly Advertising Expense	$ 150.00
Average Weekly Sales	1,200.00

Now, apply the formula described in the article from Advertising Age as you complete the form below: (As an example, the effect of a 50¢ increase on each dollar previously spent has been worked out for you.)

USING ADVERTISING TO INCREASE SALES

Increase	Advertising Expense	Increase	Weekly Sales
None	$150	None	$1,200
$.50 on $1	$150 + 75 = $225	$.20 on $1.00	$1,200 + 240 = $1,440
$1 for each $1 previously spent	*$150 + 150 = $300*	*$.35 on $1*	*$1,200 + 420 $1,620*
$1.50 more per $1.00	*$150 + 225 = $375*	*$.50 on $1*	*$1,200 + 600 = $1,800*
$2 for each $1 previously spent	*$150 + 300 = $450*	*$.65 on $1*	*$1,200 + 780 = $1,980*

After Sharon looks at this form, what additional matters should she discuss with her employees about a proposed increase in advertising?

Sharon should discuss how wages and other expenses might be affected should her sales increase.

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And you will get
this amount more
on each previous
dollar of sales:

$ .20
.35
.50
.65

Before completing the form on page 264, students will need to study all of the information on page 263. (You may want to have them role-play the dialogue.)

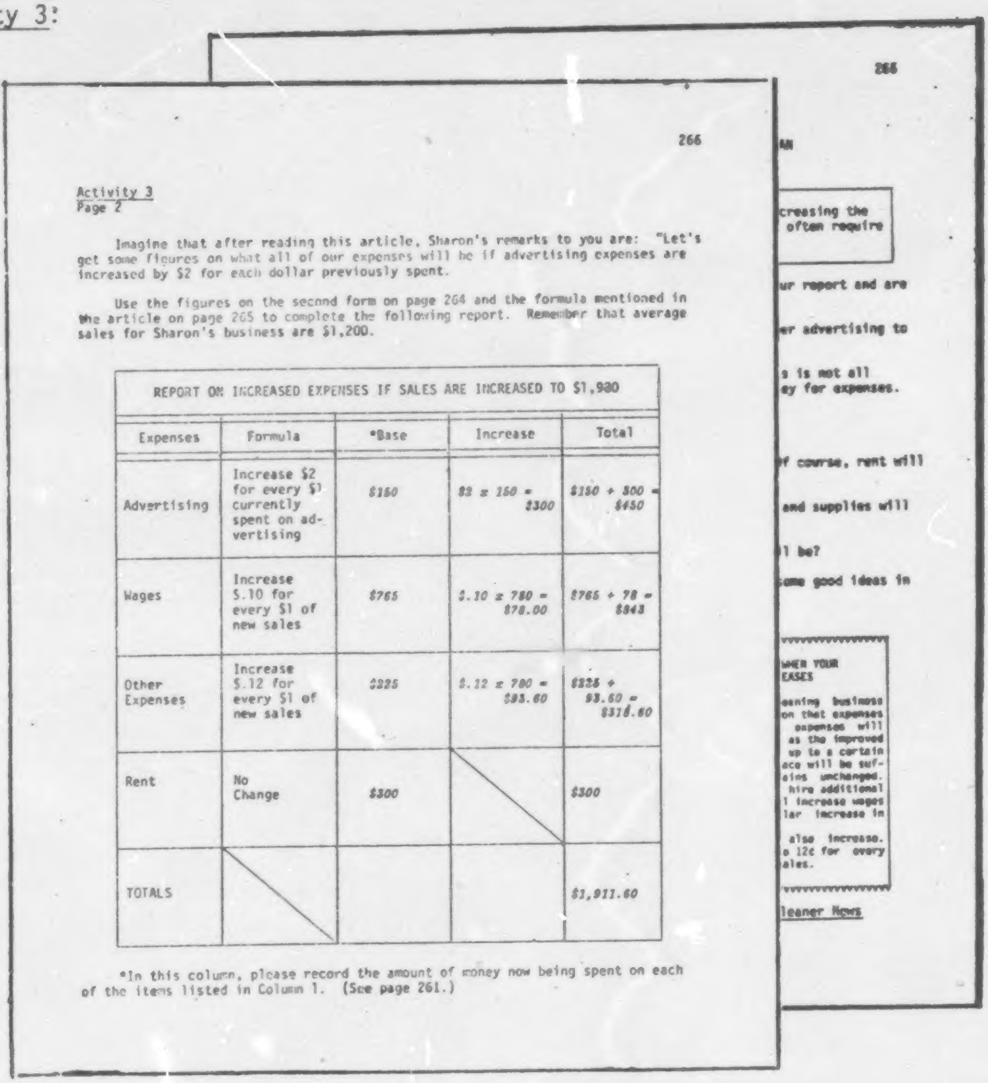
The formula and figures for determining how increases in advertising affect weekly sales are in the reprint of the article from Advertising Age. As an example, the effect of an increase of 50¢ in advertising is shown on the second line on the form on page 264.

Have students orally react to the question on the bottom of page 264.

KEY - UNIT 13

USING AN INDUSTRY FORMULA TO DETERMINE THE EFFECT OF AN INCREASE IN SALES ON EXPENSES

Activity 3:



Activity 3
Page 2

Imagine that after reading this article, Sharon's remarks to you are: "Let's get some figures on what all of our expenses will be if advertising expenses are increased by $2 for each dollar previously spent.

Use the figures on the second form on page 264 and the formula mentioned in the article on page 265 to complete the following report. Remember that average sales for Sharon's business are $1,200.

REPORT ON INCREASED EXPENSES IF SALES ARE INCREASED TO $1,980

Expenses	Formula	*Base	Increase	Total
Advertising	Increase $2 for every $1 currently spent on advertising	$150	$2 x 150 = $300	$150 + 300 = $450
Wages	Increase $.10 for every $1 of new sales	$765	$.10 x 780 = $78.00	$765 + 78 = $843
Other Expenses	Increase $.12 for every $1 of new sales	$225	$.12 x 780 = $93.60	$225 + 93.60 = $318.60
Rent	No Change	$300		$300
TOTALS				$1,911.60

*In this column, please record the amount of money now being spent on each of the items listed in Column 1. (See page 261.)

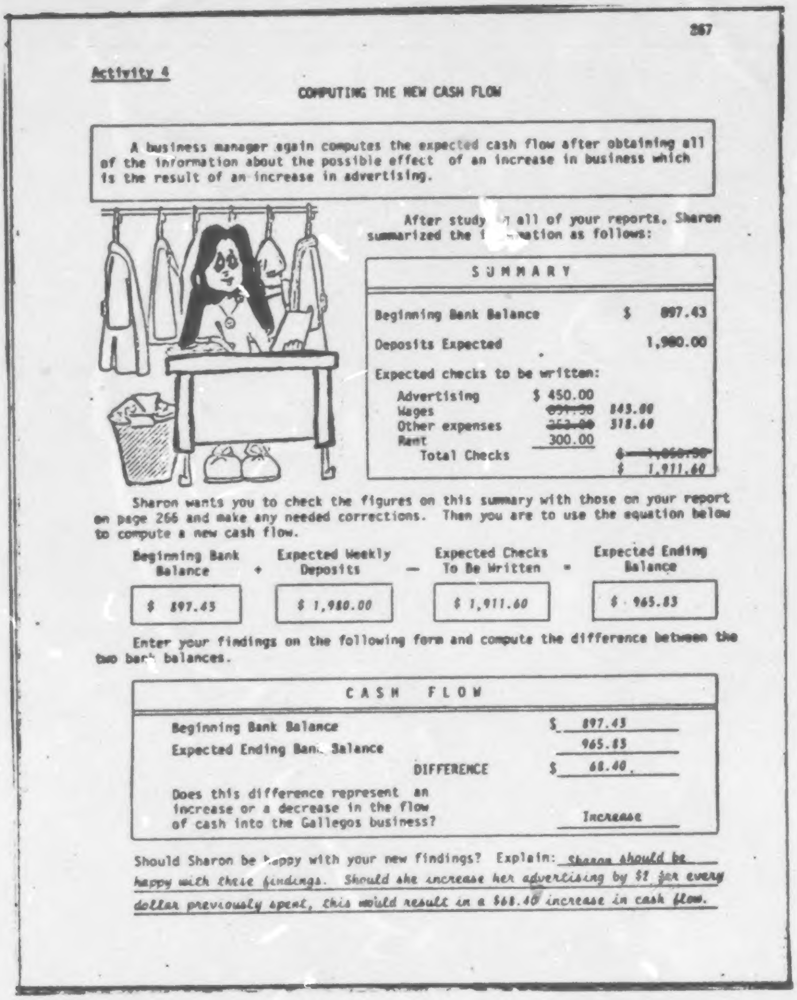
Students are to study all of the information on page 265, including the formula described in the reprint of the article from Dry Cleaning News. Again, you may want to have them role-play the dialogue.

Should Sharon spend $2 more on advertising for every dollar previously spent, her weekly sales should increase from $1,200 to $1,980. The difference between the two figures is $780, which would represent the volume of new sales. Students will need to work with the $780 figure to determine the effect of this amount of an increase in sales on the amount of money currently being spent on wages, rent, and other expenses.

KEY - UNIT 13

COMPUTING THE NEW CASH FLOW

Activity 4:



267

Activity 4

COMPUTING THE NEW CASH FLOW

A business manager again computes the expected cash flow after obtaining all of the information about the possible effect of an increase in business which is the result of an increase in advertising.

After studying all of your reports, Sharon summarized the information as follows:

SUMMARY

Beginning Bank Balance			$ 897.43
Deposits Expected			1,980.00
Expected checks to be written:			
Advertising	$ 450.00		
Wages	~~[illegible]~~	843.00	
Other expenses	~~[illegible]~~	318.60	
Rent	300.00		
Total Checks			~~$ [illegible]~~ $ 1,911.60

Sharon wants you to check the figures on this summary with those on your report on page 266 and make any needed corrections. Then you are to use the equation below to compute a new cash flow.

Beginning Bank Balance	+	Expected Weekly Deposits	—	Expected Checks To Be Written	=	Expected Ending Balance
$ 897.43		$ 1,980.00		$ 1,911.60		$ 965.83

Enter your findings on the following form and compute the difference between the two bank balances.

CASH FLOW

Beginning Bank Balance	$ 897.43
Expected Ending Bank Balance	965.83
DIFFERENCE	$ 68.40
Does this difference represent an increase or a decrease in the flow of cash into the Gallegos business?	Increase

Should Sharon be happy with your new findings? Explain: Sharon should be happy with these findings. Should she increase her advertising by $1 for every dollar previously spent, this would result in a $68.40 increase in cash flow.

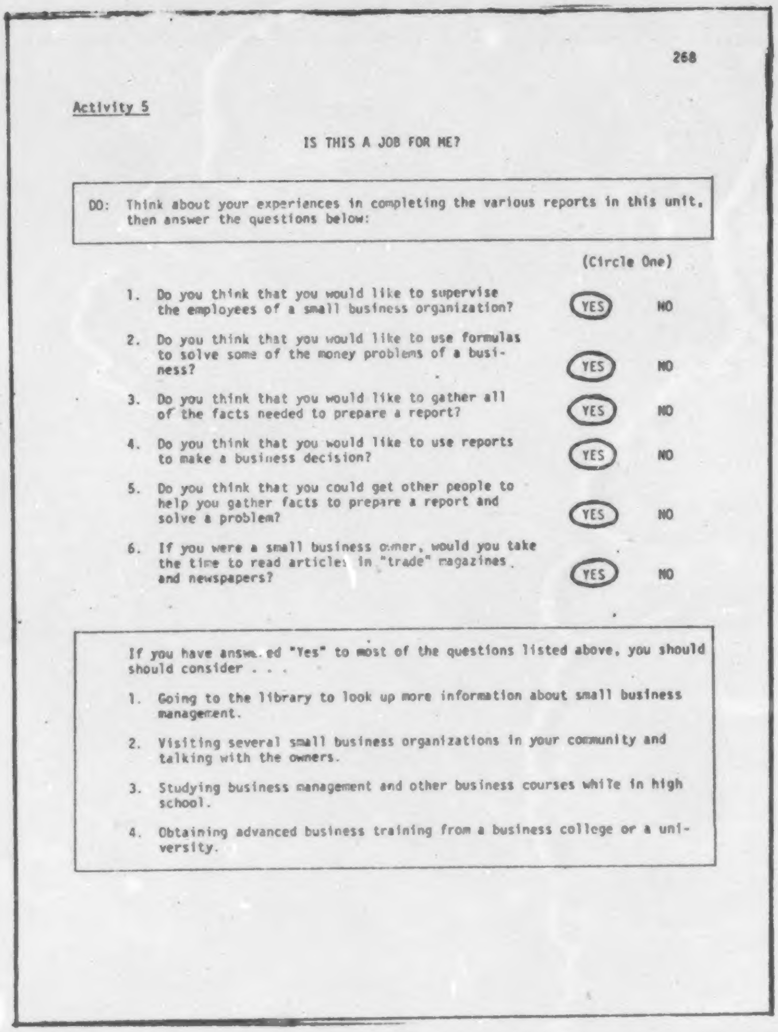
On Sharon's summary, the figures representing the "Beginning Bank Balance" and "Deposits Expected" are correct; however, students must correct three others.

Have students orally react to the question at the bottom of this sheet.

KEY - UNIT 13

IS THIS A JOB FOR ME?

Activity 5:



Activity 5

IS THIS A JOB FOR ME?

DO: Think about your experiences in completing the various reports in this unit, then answer the questions below:

	(Circle One)	
1. Do you think that you would like to supervise the employees of a small business organization?	[✓ YES]	NO
2. Do you think that you would like to use formulas to solve some of the money problems of a business?	[✓ YES]	NO
3. Do you think that you would like to gather all of the facts needed to prepare a report?	[✓ YES]	NO
4. Do you think that you would like to use reports to make a business decision?	[✓ YES]	NO
5. Do you think that you could get other people to help you gather facts to prepare a report and solve a problem?	[✓ YES]	NO
6. If you were a small business owner, would you take the time to read articles in "trade" magazines and newspapers?	[✓ YES]	NO

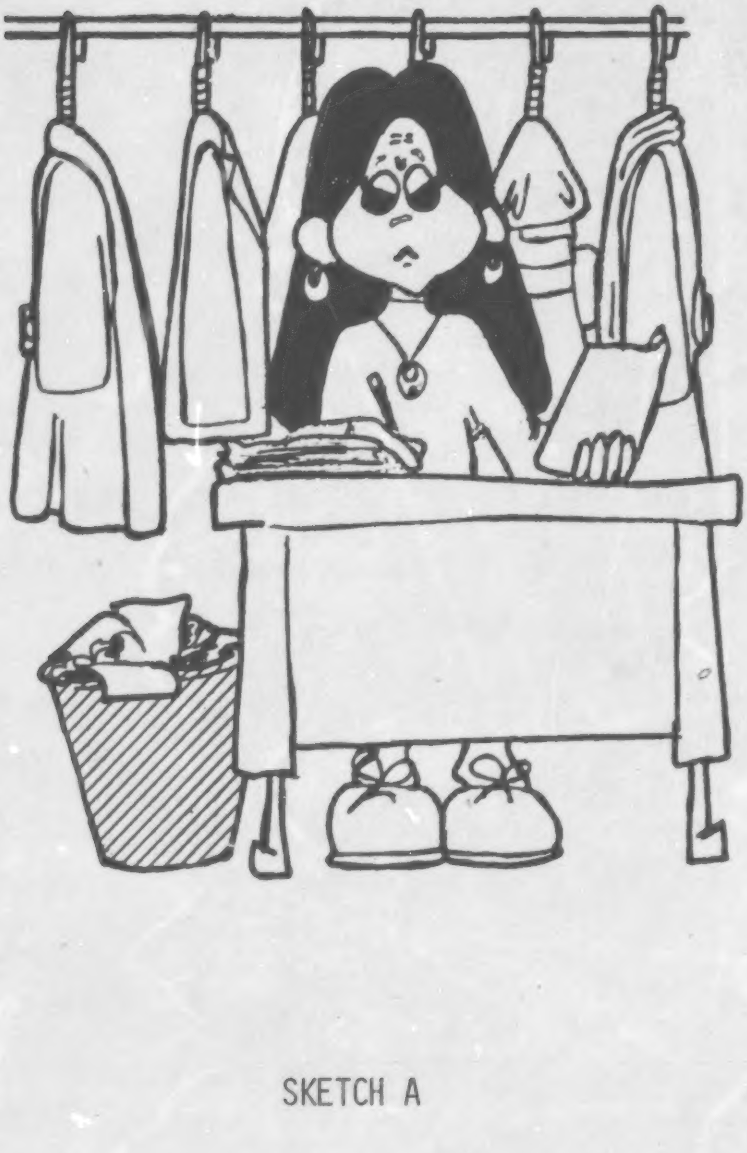
If you have answered "Yes" to most of the questions listed above, you should should consider . . .

1. Going to the library to look up more information about small business management.
2. Visiting several small business organizations in your community and talking with the owners.
3. Studying business management and other business courses while in high school.
4. Obtaining advanced business training from a business college or a university.

Because individual answers will vary, have students orally react to the questions and other information listed on this page.

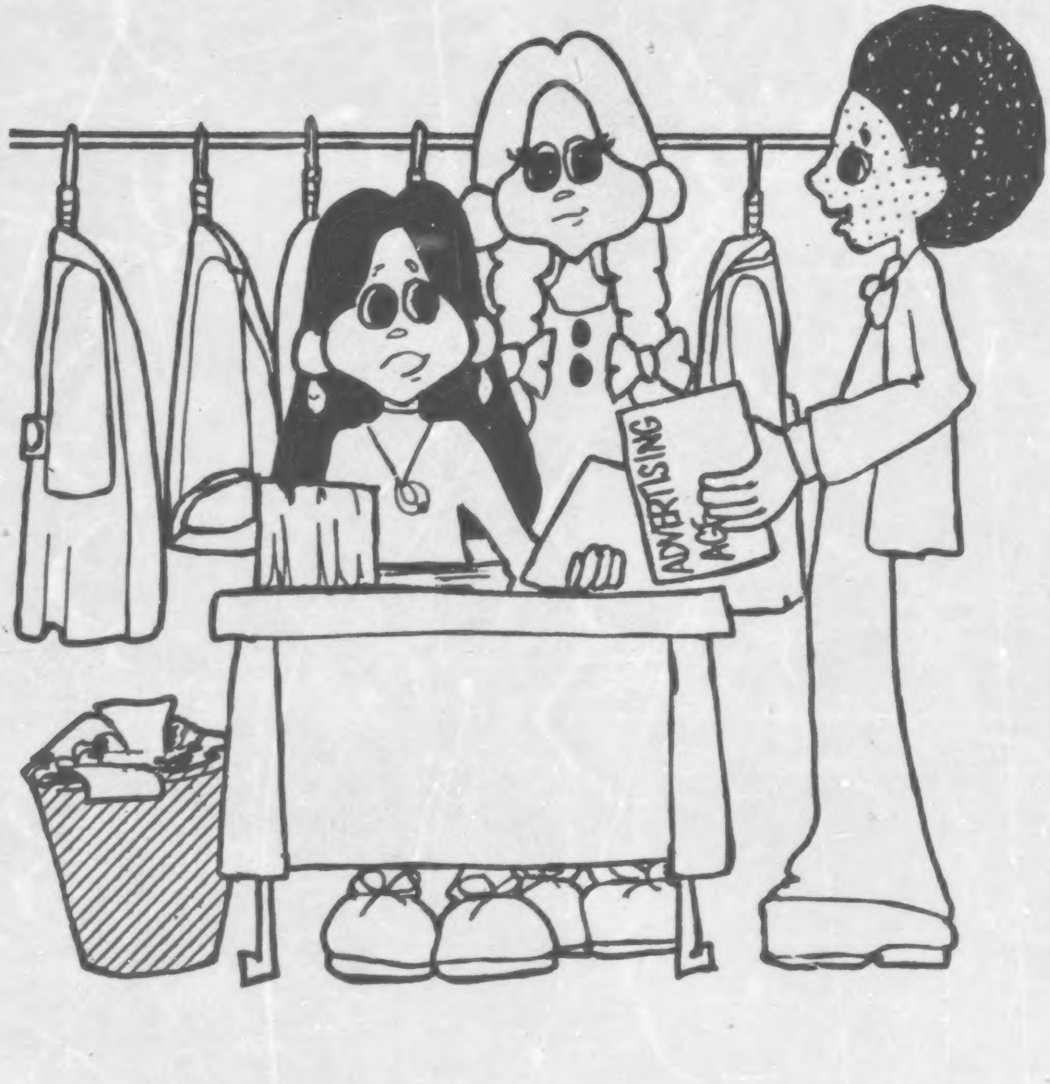
Supplement any points mentioned with some of the information outlined in "General Information About Owner-Managers." (See page 249.)

I HAVE A DECLINING CASH BALANCE. WHY SHOULD I WORRY?



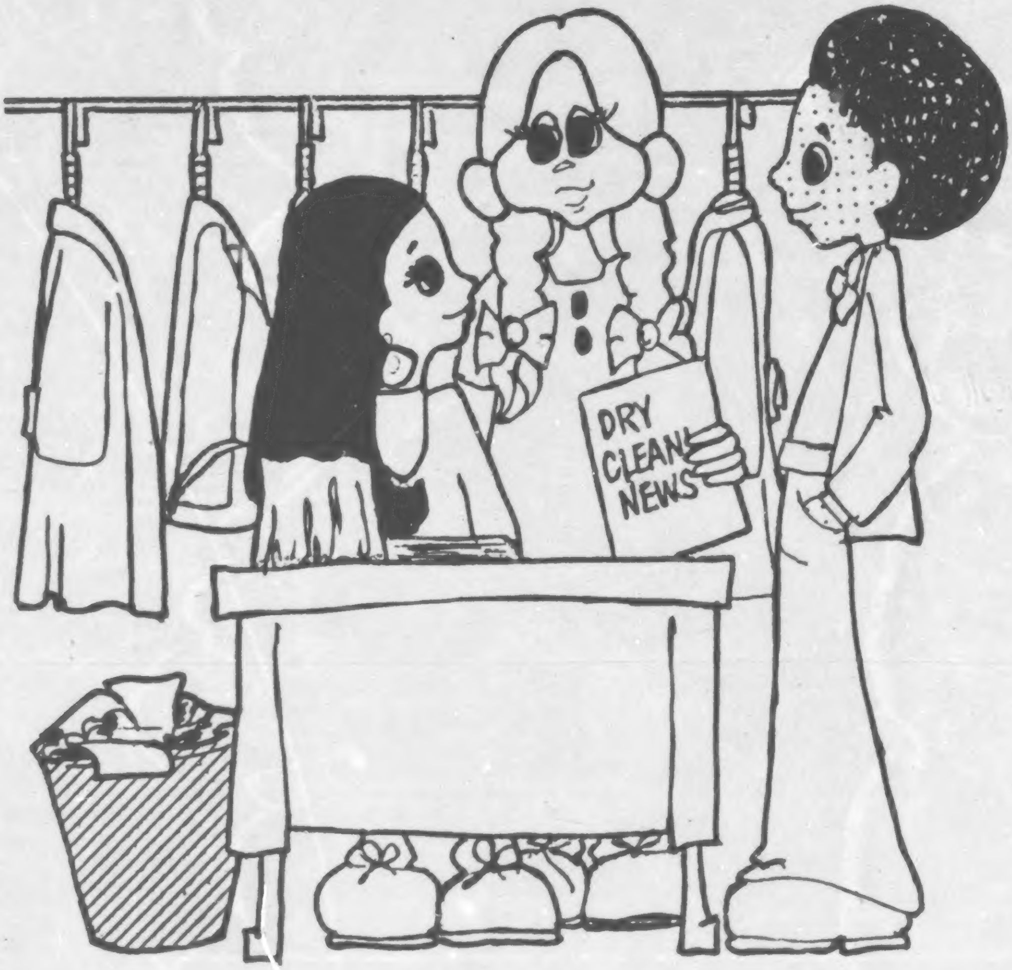
SKETCH A

WOULD YOU BE INTERESTED IN AN INDUSTRY FORMULA WHICH MAY HELP YOU WITH YOUR PROBLEM?


ADVERTISING AG

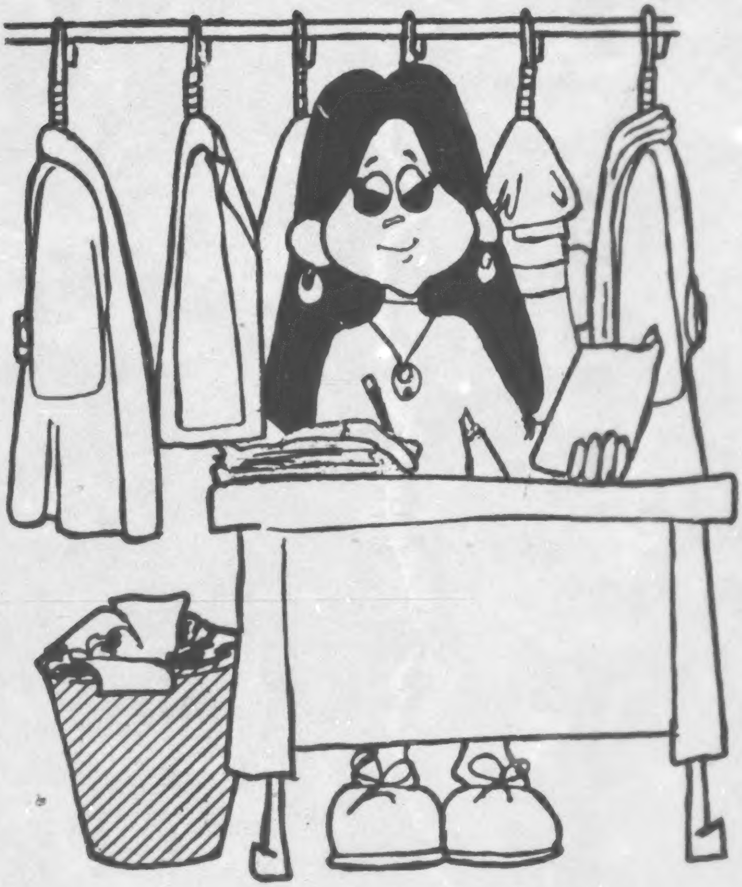
SKETCH B

THERE IS AN ARTICLE IN THIS PAPER WHICH YOU OUGHT TO READ!


DRY
CLEAN
NEWS

SKETCH C

"THREE HEADS" ARE BETTER THAN ONE. I'M GOING TO TRY THESE NEW IDEAS.



SKETCH D

UNIT 13

HOW THE OWNER-MANAGER OF A DRY CLEANING SHOP USES EQUATIONS TO PLAN FOR AN INCREASE IN CASH FLOW

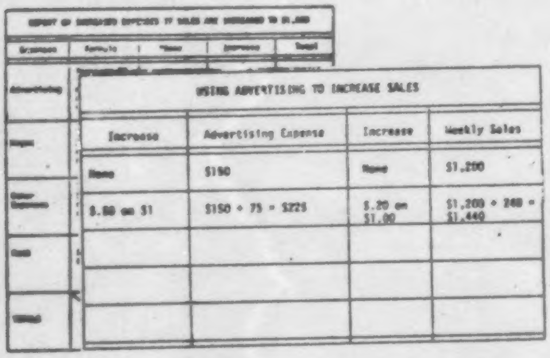
As the owner and general manager of a dry cleaning establishment, Sharon Gallegos must be concerned with the overall operation of her business. Although she supervises the work of these two employees, Sharon frequently seeks the advice of her accountant and advertising manager when she is concerned about "cash flow." To meet all of her expenses, Sharon knows that the amount of cash "flowing" into her business must be equal to or greater than the amount which "flows" out.

As you work through the activities in this unit, you will learn how Sharon solves some of her problems for you will . . .

To compute her cash flow, Sharon uses the following equation:

Beginning Bank Balance + Deposits from Dry Cleaning Sales − Checks Written For Rent, Wages, and Other Expenses = Ending Bank Balance

1. Use equations to compute an actual and an estimated cash flow for the Gallegos dry cleaning business.



USING ADVERTISING TO INCREASE SALES

Increase	Advertising Expense	Increase	Weekly Sales
None	$150	None	$1,200
$.80 on $1	$150 + 75 = $225	$.20 on $1.00	$1,200 + 240 = $1,440

ADVERTISING AC

2. Use industry formulas to determine the effect of an increase in advertising on weekly sales and the effect of an increase in business on expenses.

3. Find out how Sharon Gallegos uses the information in the articles of "trade" papers and magazines.

Activity 1:

USING AN EQUATION TO COMPUTE CASH FLOW

To make certain that there will be enough cash on hand to "meet the payroll" and pay other expenses, a business manager must compute the "cash flow."

Each week, Sharon hopes that the amount of cash "flowing" into her bank account will at least be equal to the amount "flowing out." She knows that if the total amount of her daily deposits is not equal to or greater than the total in checks written, she will not be able to meet end-of-week payroll and other expenses.

To compute her cash flow, Sharon uses the following equation:

Beginning Bank Balance	+	Deposits from Dry Cleaning Sales	–	Checks Written For Rent, Wages, and Other Expenses	=	Ending Bank Balance

On Monday morning, Sharon had reason to use this equation, for she was concerned about the reports shown below:

GALLEGOS DRY CLEANING	
Bank Balance	$ 897.43
Average Weekly Deposits	$ 1,200.00

GALLEGOS DRY CLEANING		
Bills to be Paid During the Week:		
Wages:	Joe	$ 150.00
	Mary	125.00
	Gari	165.00
	Ellen	170.00
	Bob	155.00
Rent		300.00
Advertising		150.00
Other Expenses		225.00

Activity 1:
Page 2

Assist Sharon by using the figures from the reports on the previous page and the equation shown below to arrive at an estimate as to what her bank balance may be at the end of the week.

Beginning Bank Balance		Average Weekly Deposits		Total of Checks To Be Written		Ending Bank Balance
	+		—		=	

Now, complete the following form:

C A S H F L O W

Beginning Bank Balance $________________

Ending Bank Balance ________________

DIFFERENCE $________________

Does this difference represent an increase or a decrease in the flow of cash into the Gallegos business? ________________

Do you think that Sharon will be happy with your findings? Explain.

____

____

____

____

____

____

____

Activity 2:

PLANNING TO INCREASE SALES BY MEANS OF INDUSTRY FORMULAS

Owners who want to increase the amount of cash flowing into their businesses should seek advice from their accountants and advertising managers. They should also read the helpful information which may be found in "trade" papers and magazines.

Since Sharon is concerned about the amount of cash flowing into the Gallegos Dry Cleaning business, she has called a meeting with her accountant and advertising manager; and the following discussion is taking place:

Sharon: We need to increase sales so that we can continue to pay all of our expenses. What can we do?

Accountant: We certainly need to do something because the amount in checks written was $220 more than our average weekly deposits.

Advertising Manager: I think we should double or triple our newspaper advertising.

Sharon: We need some facts on what advertising will do to sales.

Advertising Manager: I came across an article, "A New Formula to Increase Dry Cleaning Sales," in this week's issue of Advertising Age.

Sharon: Let's see it.

ADVERTISING AGE

A NEW FORMULA TO INCREASE DRY CLEANING SALES

Increase your sales by 20¢ for each dollar you are now getting, says Charles Cantrell, of Advertising Age. The way to do it is to increase advertising 50¢ for each dollar spent previously. Cantrell says it works in many communities. Spending more, he says, will increase sales more as shown below:

For each previous dollar of advertising, spend this much more:	And you will get this amount more on each previous dollar of sales:
$ .50	$ .20
1.00	.35
1.50	.50
2.00	.65

Article in Advertising Age

Activity 2
Page 2

Assume that after reading the article, Sharon has asked you to determine how the formula might be applied to her business.

First, take just a moment to examine this report:

GALLEGOS DRY CLEANING	
Average Weekly Advertising Expense	$ 150.00
Average Weekly Sales	1,200.00

Now, apply the formula described in the article from Advertising Age as you complete the form below: (As an example, the effect of a 50¢ increase on each dollar previously spent has been worked out for you.)

USING ADVERTISING TO INCREASE SALES

Increase	Advertising Expense	Increase	Weekly Sales
None	$150	None	$1,200
$.50 on $1	$150 + 75 = $225	$.20 on $1.00	$1,200 + 240 = $1,440

After Sharon looks at this form, what additional matters should she discuss with her employees about a proposed increase in advertising?

____

____

Activity 3

USING AN INDUSTRY FORMULA TO DETERMINE THE EFFECT OF AN INCREASE IN SALES ON EXPENSES

Managers and their accountants must determine the cost of increasing the amount of cash flowing into a business since an increase in sales often requires more employees and more supplies.

Sharon, her accountant, and advertising manager have read your report and are now holding the following conversation:

Sharon: Let's talk about our plan of increasing newspaper advertising to get more sales.

Accountant: Let's not forget that money from increased sales is not all gravy. You have to plan on paying out more money for expenses.

Advertising Manager: What else besides advertising expenses?

Sharon: We may need to hire another employee or two. Of course, rent will stay the same, since we have plenty of space.

Accountant: Other expenses such as light, heat, telephone, and supplies will go up.

Sharon: How can we determine how much each of these will be?

Accountant: I have already been looking into it and found some good ideas in the Dry Cleaner News.

DRY
CLEAN
NEWS

WHAT TO COUNT ON WHEN YOUR BUSINESS INCREASES

Increased dry cleaning business calls for recognition that expenses will increase. The expenses will not increase as much as the improved sales. For example, up to a certain point, the rental space will be sufficient; so rent remains unchanged.

You will need to hire additional employees, which will increase wages 10¢ for every dollar increase in sales.

Other expenses also increase. Usually, they go up 12¢ for every dollar increase in sales.

Article in Dry Cleaner News

Activity 3
Page 2

Imagine that after reading this article, Sharon's remarks to you are: "Let's get some figures on what all of our expenses will be if advertising expenses are increased by $2 for each dollar previously spent.

Use the figures on the second form on page 264 and the formula mentioned in the article on page 265 to complete the following report. Remember that average sales for Sharon's business are $1,200.

REPORT ON INCREASED EXPENSES IF SALES ARE INCREASED TO $1,980

Expenses	Formula	*Base	Increase	Total
Advertising	Increase $2 for every $1 currently spent on advertising			
Wages	Increase $.10 for every $1 of new sales			
Other Expenses	Increase $.12 for every $1 of new sales			
Rent	No Change			
TOTALS				

*In this column, please record the amount of money now being spent on each of the items listed in Column 1. (See page 261.)

Activity 4

COMPUTING THE NEW CASH FLOW

A business manager again computes the expected cash flow after obtaining all of the information about the possible effect of an increase in business which is the result of an increase in advertising.

After studying all of your reports, Sharon summarized the information as follows:

SUMMARY

Beginning Bank Balance		$ 897.43
Deposits Expected		1,980.00
Expected checks to be written:		
Advertising	$ 450.00	
Wages	851.50	
Other expenses	252.00	
Rent	300.00	
Total Checks		$ 1,853.50

Sharon wants you to check the figures on this summary with those on your report on page 266 and make any needed corrections. Then you are to use the equation below to compute a new cash flow.

Beginning Bank Balance	+	Expected Weekly Deposits	—	Expected Checks To Be Written	=	Expected Ending Balance

Enter your findings on the following form and compute the difference between the two bank balances.

CASH FLOW

Beginning Bank Balance $______________

Expected Ending Bank Balance ______________

DIFFERENCE $______________

Does this difference represent an increase or a decrease in the flow of cash into the Gallegos business? ______________

Should Sharon be happy with your new findings? Explain:______________

____

____

Activity 5

IS THIS A JOB FOR ME?

DO: Think about your experiences in completing the various reports in this unit, then answer the questions below:

	(Circle One)	
1. Do you think that you would like to supervise the employees of a small business organization?	YES	NO
2. Do you think that you would like to use formulas to solve some of the money problems of a business?	YES	NO
3. Do you think that you would like to gather all of the facts needed to prepare a report?	YES	NO
4. Do you think that you would like to use reports to make a business decision?	YES	NO
5. Do you think that you could get other people to help you gather facts to prepare a report and solve a problem?	YES	NO
6. If you were a small business owner, would you take the time to read articles in "trade" magazines and newspapers?	YES	NO

If you have answered "Yes" to most of the questions listed above, you should should consider . . .

1. Going to the library to look up more information about small business management.
2. Visiting several small business organizations in your community and talking with the owners.
3. Studying business management and other business courses while in high school.
4. Obtaining advanced business training from a business college or a university.

UNIT 14

HOW A PERSONNEL OFFICER FOR A MANUFACTURING CONCERN USES MEASURES OF CENTRAL TENDENCY

PURPOSE:

This unit introduces students to the job of personnel officer while giving them the opportunity to practice their skills at finding frequency distribution, mean, median, and mode.

MAJOR ACTIVITIES:

In completing the activities in this unit, the students will:

1. Construct a frequency table.
2. Compute the mean, median, and mode for five sets of employee scores.
3. Construct a frequency polygon.
4. Select for jobs, applicants that test scores indicate are best suited.
5. Read of the activities of Lisa Huntington, the personnel officer for a manufacturing concern.

BEFORE CLASS BEGINS:

1. Thoroughly acquaint yourself with the student materials (the white sheets at the end of the unit) and determine their applicability to your class.
2. Familiarize yourself with the design of the teacher keys (the buff sheets).
3. Duplicate and assemble enough of the student material for each class member.
4. Read the background information sheet on the personnel officer on page 271.
5. Review the optional activities.

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During Class:

1. Distribute the simulation packet.
2. With the students, read and discuss the introduction on page 280.
3. Ask the students to complete the activities on pages 281 through 288. While they are busy with their tasks, you may wish to review the information on the teacher keys, pages 272 through 279.
4. When a majority of your students complete their work, go through the unit with the entire class. Check answers and discuss any items listed on the keys to each of the activities.

OPTIONAL ACTIVITIES:

Statistics

Have the students compile information on the class members' weight, shoe sizes, etc. Find the mean, median, and mode for this information.

Interview

Invite a personnel director to speak to the class on how statistics are used in personnel work.

Please follow the recommended class interview procedures presented for guest speakers in the appendix.

GENERAL INFORMATION ON PERSONNEL OFFICERS

Attracting the best employees available and matching them to jobs they can do effectively are important for the successful operation of business and government. Personnel workers interview, select, and recommend applicants who have the education and experience to fill vacancies. In addition to staffing, they counsel employees, plan training, develop wage and salary scales, and investigate methods to improve personnel operations. Some jobs require only limited contact with people; others involve frequent contact with employees, union representatives, job applicants, and other people outside the organization.

Personnel workers in government agencies generally do the same kind of work as those in large business firms. Government personnel workers, however, spend considerably more time classifying jobs, and devising, administering, and scoring competitive examinations given to job applicants.

In 1972, about 235,000 people-- three-fourths of them men-- were personnel workers. Most jobs for personnel workers are located in the highly industrialized sections of the country.

Although most employers seek college graduates to work in personnel, some prefer workers who already have firsthand knowledge of operations, regardless of their educational preparation. Large numbers now in personnel work who are not college graduates entered the field this way.

New workers usually enter formal or on-the-job training programs to learn how to classify jobs, interview applicants, or perform other personnel functions. After training, they are assigned to work in specific areas.

Personnel workers should speak and write effectively and be able to work with people of all levels of intelligence and experience. They also must be able to see both the employee's and the employer's points of view. In addition, personnel workers should be able to work as part of a team. They need supervisory abilities and must be able to accept responsibility. A personnel worker should like detail, be persuasive, and have a congenial personality.

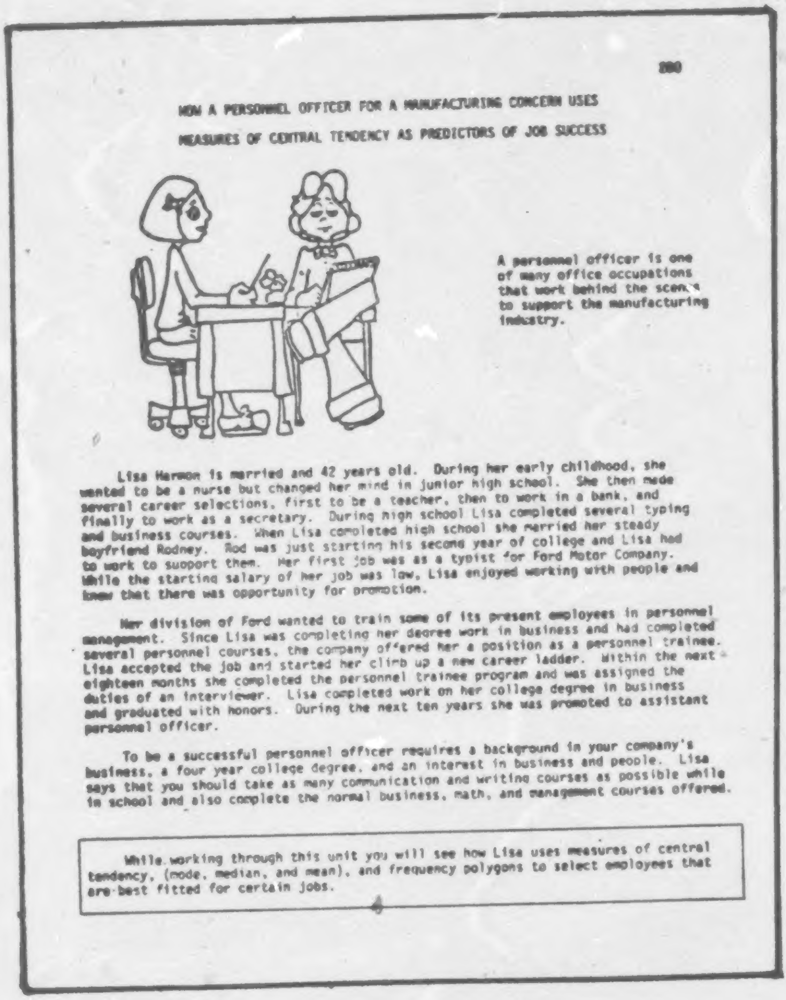
After gaining experience, personnel workers usually can advance within their own organization or transfer to other employers. Those in the middle ranks of a big organization often transfer to a top job in a smaller one. Employees with exceptional ability usually are promoted to executive positions, such as personnel director.

Employees in personnel offices generally work 35 to 40 hours a week. During a period of intensive recruitment or emergency, they may work much longer. As a rule, personnel workers are paid for holidays and vacations, and share in the same retirement plans and other benefits available to all professional workers in their organizations.

KEY - UNIT 14

HOW A PERSONNEL OFFICER FOR A MANUFACTURING CONCERN USES MEASURES OF CENTRAL TENDENCY AS PREDICTORS OF JOB SUCCESS

Introductory Page:



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HOW A PERSONNEL OFFICER FOR A MANUFACTURING CONCERN USES MEASURES OF CENTRAL TENDENCY AS PREDICTORS OF JOB SUCCESS

A personnel officer is one of many office occupations that work behind the scenes to support the manufacturing industry.

Lisa Harmon is married and 42 years old. During her early childhood, she wanted to be a nurse but changed her mind in junior high school. She then made several career selections, first to be a teacher, then to work in a bank, and finally to work as a secretary. During high school Lisa completed several typing and business courses. When Lisa completed high school she married her steady boyfriend Rodney. Rod was just starting his second year of college and Lisa had to work to support them. Her first job was as a typist for Ford Motor Company. While the starting salary of her job was low, Lisa enjoyed working with people and knew that there was opportunity for promotion.

Her division of Ford wanted to train some of its present employees in personnel management. Since Lisa was completing her degree work in business and had completed several personnel courses, the company offered her a position as a personnel trainee. Lisa accepted the job and started her climb up a new career ladder. Within the next eighteen months she completed the personnel trainee program and was assigned the duties of an interviewer. Lisa completed work on her college degree in business and graduated with honors. During the next ten years she was promoted to assistant personnel officer.

To be a successful personnel officer requires a background in your company's business, a four year college degree, and an interest in business and people. Lisa says that you should take as many communication and writing courses as possible while in school and also complete the normal business, math, and management courses offered.

While working through this unit you will see how Lisa uses measures of central tendency, (mode, median, and mean), and frequency polygons to select employees that are best fitted for certain jobs.

THE INDUSTRY

THE JOB

THE STUDENTS' WORK

This page introduces the students to the manufacturing industry, Lisa Harmon, and the activities of the unit. Ask the students to read the page. Once they are finished, you may want to:

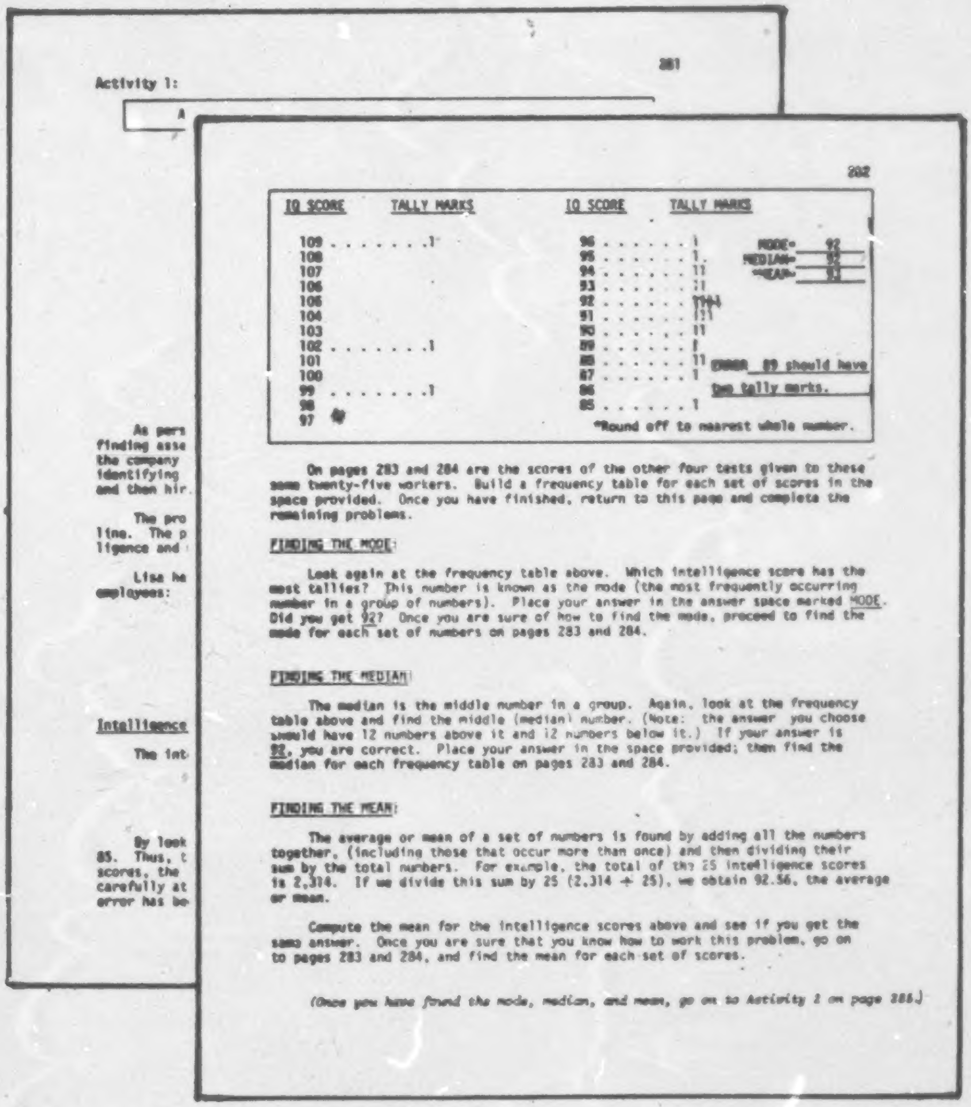
1. Discuss Lisa Harmon. What special preparation did Lisa need for this job? What personal qualities does she have?

2. Work in the Unit. What are measures of central tendency and frequency polygons? How might they be used to select employees?

KEY - UNIT 14

A PERSONNEL OFFICER COMPUTES MEASURES OF CENTRAL TENDENCY

Activity 1:



281

Activity 1:

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Intelligence

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error has be

282

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
109	1	96	1
108		95	1
107		94	11
106		93	11
105		92	~~1111~~
104		91	111
103		90	11
102	1	89	1
101		88	11
100		87	1
99	1	86	
98		85	1
97			

MODE= 92
MEDIAN= 92
*MEAN= 93

ERROR 89 should have two tally marks.

*Round off to nearest whole number.

On pages 283 and 284 are the scores of the other four tests given to these same twenty-five workers. Build a frequency table for each set of scores in the space provided. Once you have finished, return to this page and complete the remaining problems.

FINDING THE MODE:

Look again at the frequency table above. Which intelligence score has the most tallies? This number is known as the mode (the most frequently occurring number in a group of numbers). Place your answer in the answer space marked MODE. Did you get 92? Once you are sure of how to find the mode, proceed to find the mode for each set of numbers on pages 283 and 284.

FINDING THE MEDIAN:

The median is the middle number in a group. Again, look at the frequency table above and find the middle (median) number. (Note: the answer you choose should have 12 numbers above it and 12 numbers below it.) If your answer is 92, you are correct. Place your answer in the space provided; then find the median for each frequency table on pages 283 and 284.

FINDING THE MEAN:

The average or mean of a set of numbers is found by adding all the numbers together, (including those that occur more than once) and then dividing their sum by the total numbers. For example, the total of the 25 intelligence scores is 2,314. If we divide this sum by 25 (2,314 ÷ 25), we obtain 92.56, the average or mean.

Compute the mean for the intelligence scores above and see if you get the same answer. Once you are sure that you know how to work this problem, go on to pages 283 and 284, and find the mean for each set of scores.

(Once you have found the mode, median, and mean, go on to Activity 2 on page 285.)

The first page of this activity (the bottom page above) offers students an overview of the unit and introduces them to frequency tables.

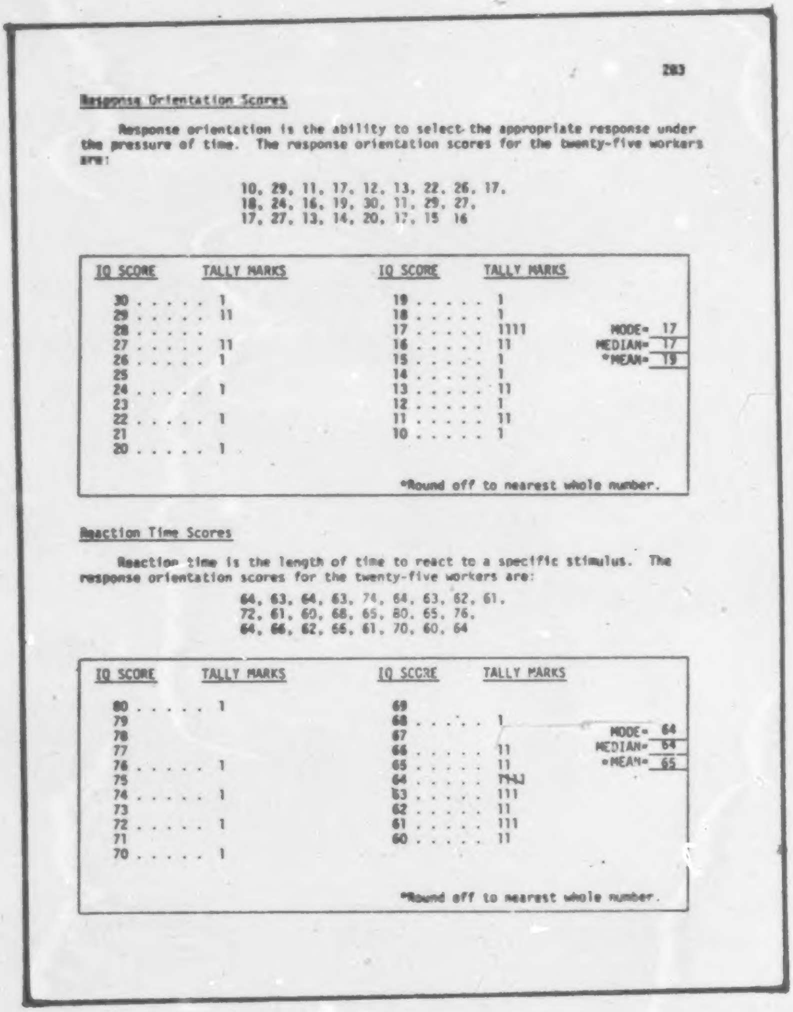
A sample frequency table has been completed at the top of the second page (the top page above). An error has been made in this table. In order to find the error, the student must examine closely how the numbers on the first page were used in the table. Give individual help to students who can not find the error.

The remainder of the second page contains instructions for finding mode, median, and mean. The student is referred to pages 283 and 284 where they will construct frequency tables and find mode, median, and mean.

KEY - UNIT 14

A PERSONNEL OFFICER COMPUTES MEASURES OF CENTRAL TENDENCY

Activity 1 (continued):



Response Orientation Scores

Response orientation is the ability to select the appropriate response under the pressure of time. The response orientation scores for the twenty-five workers are:

10, 29, 11, 17, 12, 13, 22, 26, 17,
18, 24, 16, 19, 30, 11, 29, 27,
17, 27, 13, 14, 20, 17, 15 16

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
30	1	19	1
29	11	18	1
28		17	1111
27	11	16	11
26	1	15	1
25		14	1
24	1	13	11
23		12	1
22	1	11	11
21		10	1
20	1		

MODE= 17
MEDIAN= 17
*MEAN= 19

*Round off to nearest whole number.

Reaction Time Scores

Reaction time is the length of time to react to a specific stimulus. The response orientation scores for the twenty-five workers are:

64, 63, 64, 63, 74, 64, 63, 62, 61,
72, 61, 60, 68, 65, 80, 65, 76,
64, 66, 62, 66, 61, 70, 60, 64

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
80	1	69	
79		68	1
78		67	
77		66	11
76	1	65	11
75		64	卌
74	1	63	111
73		62	11
72	1	61	111
71		60	11
70	1		

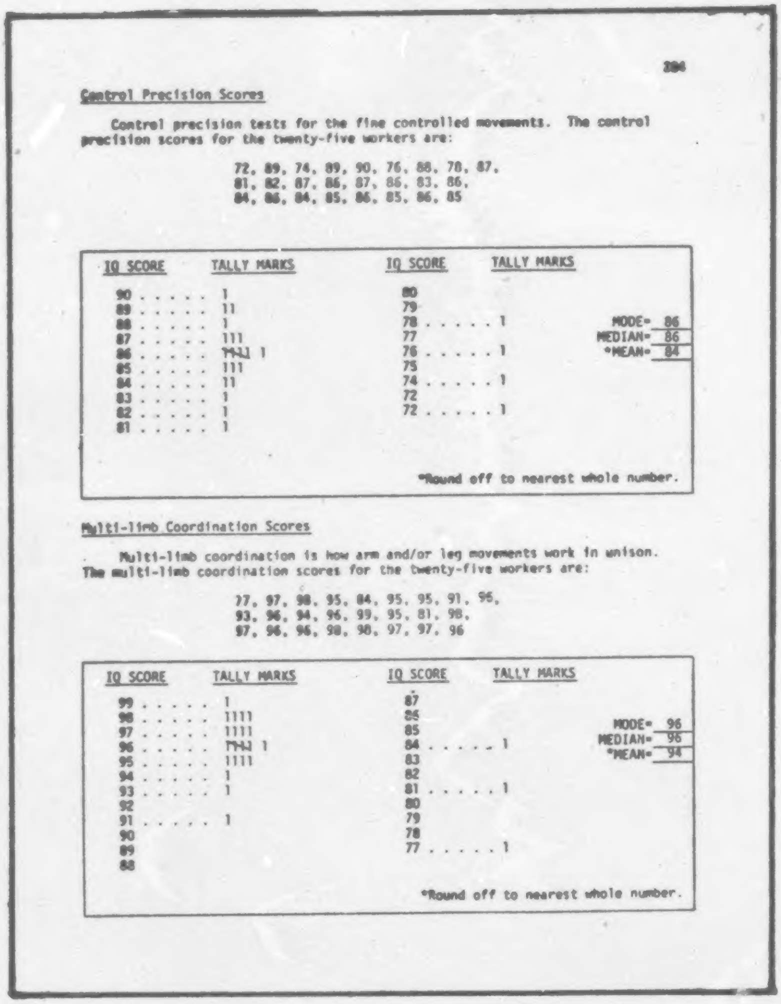
MODE= 64
MEDIAN= 64
*MEAN= 65

*Round off to nearest whole number.

KEY - UNIT 14

A PERSONNEL OFFICER COMPUTES MEASURES OF CENTRAL TENDENCY

Activity 1 (continued):



Control Precision Scores

Control precision tests for the fine controlled movements. The control precision scores for the twenty-five workers are:

72, 89, 74, 89, 90, 76, 88, 78, 87,
81, 82, 87, 86, 87, 86, 83, 86,
84, 86, 84, 85, 86, 85, 86, 85

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
90	1	80	
89	11	79	
88	1	78	1
87	111	77	
86	𝍸 1	76	1
85	111	75	
84	11	74	1
83	1	72	
82	1	72	1
81	1		

MODE= 86
MEDIAN= 86
*MEAN= 84

*Round off to nearest whole number.

Multi-limb Coordination Scores

Multi-limb coordination is how arm and/or leg movements work in unison. The multi-limb coordination scores for the twenty-five workers are:

77, 97, 98, 95, 84, 95, 95, 91, 96,
93, 96, 94, 96, 99, 95, 81, 98,
97, 96, 96, 98, 98, 97, 97, 96

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
99	1	87	
98	1111	86	
97	1111	85	
96	𝍸 1	84	1
95	1111	83	
94	1	82	
93	1	81	1
92		80	
91	1	79	
90		78	
89		77	1
88			

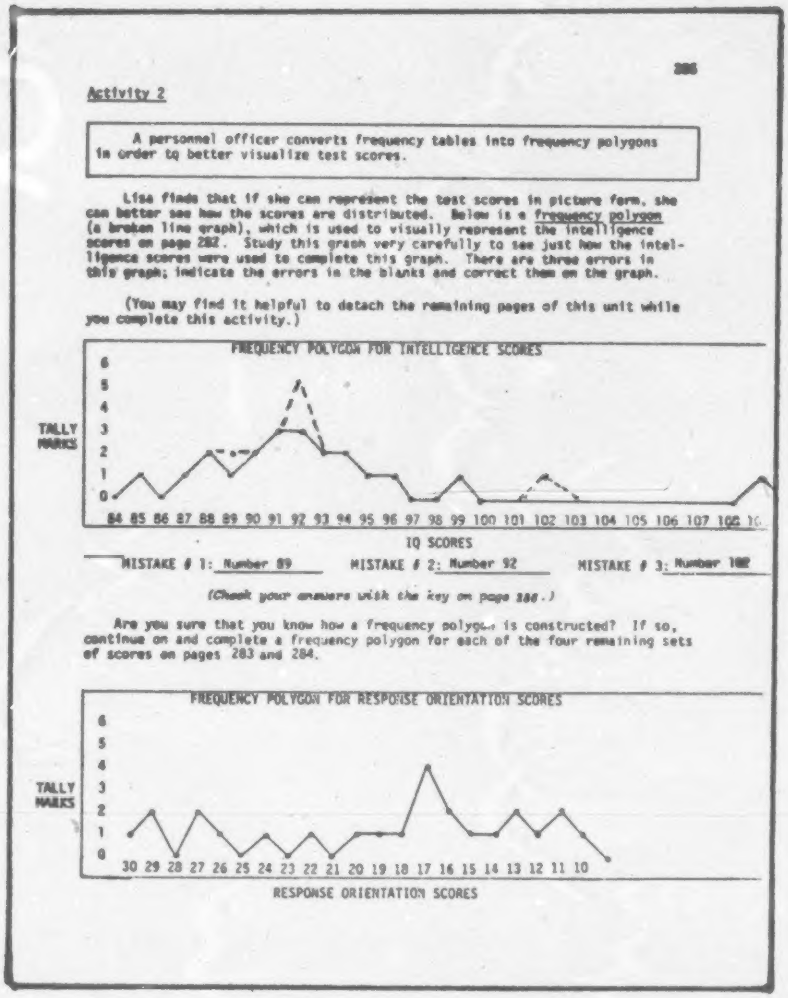
MODE= 96
MEDIAN= 96
*MEAN= 94

*Round off to nearest whole number.

KEY - UNIT 14

A PERSONNEL OFFICER CONVERTS FREQUENCY TABLES INTO FREQUENCY POLYGONS IN ORDER TO BETTER VISUALIZE TEST SCORES

Activity 2:



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Activity 2

A personnel officer converts frequency tables into frequency polygons in order to better visualize test scores.

Lisa finds that if she can represent the test scores in picture form, she can better see how the scores are distributed. Below is a frequency polygon (a broken line graph), which is used to visually represent the intelligence scores on page 282. Study this graph very carefully to see just how the intelligence scores were used to complete this graph. There are three errors in this graph; indicate the errors in the blanks and correct them on the graph.

(You may find it helpful to detach the remaining pages of this unit while you complete this activity.)

FREQUENCY POLYGON FOR INTELLIGENCE SCORES
TALLY MARKS
6
5
4
3
2
1
0
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108
IQ SCORES

MISTAKE # 1: Number 89 MISTAKE # 2: Number 92 MISTAKE # 3: Number 102

(Check your answers with the key on page 286.)

Are you sure that you know how a frequency polygon is constructed? If so, continue on and complete a frequency polygon for each of the four remaining sets of scores on pages 283 and 284.

FREQUENCY POLYGON FOR RESPONSE ORIENTATION SCORES
TALLY MARKS
6
5
4
3
2
1
0
30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10
RESPONSE ORIENTATION SCORES

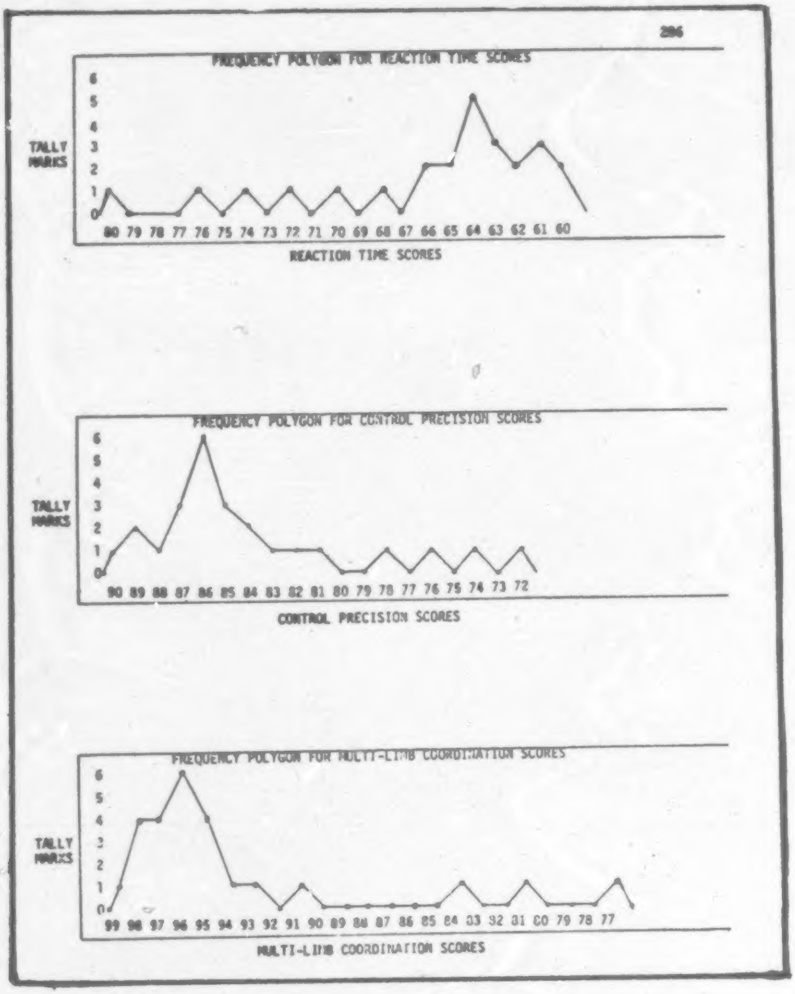
This activity introduces students to how data from frequency tables is used to construct frequency polygons.

The first frequency polygon for intelligence scores has been completed for the students. Three errors were made. In order to find the errors, the students must examine closely how the data from the frequency tables were used in the frequency polygon. Give individual help to students who can not find the errors.

KEY - UNIT 14

A PERSONNEL OFFICER CONVERTS FREQUENCY TABLES INTO FREQUENCY POLYGONS IN ORDER TO BETTER VISUALIZE TEST SCORES

Activity 2 (continued):

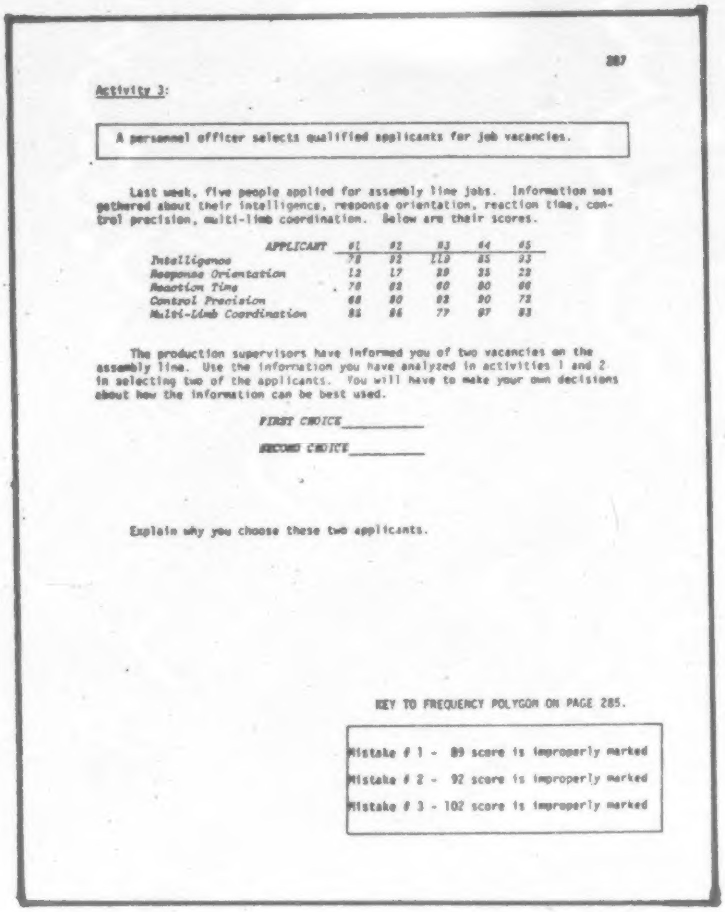


Review the student freuqency polygons either as a class or in small groups. You may want the students to mark on their frequency polygons where the mode, median, and mean would fall.

KEY - UNIT 14

A PERSONNEL OFFICER SELECTS QUALIFIED APPLICANTS FOR JOB VACANCIES

Activity 3:



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Activity 3:

A personnel officer selects qualified applicants for job vacancies.

Last week, five people applied for assembly line jobs. Information was gathered about their intelligence, response orientation, reaction time, control precision, multi-limb coordination. Below are their scores.

APPLICANT	#1	#2	#3	#4	#5
Intelligence	78	92	119	85	93
Response Orientation	12	17	29	25	22
Reaction Time	78	83	60	80	66
Control Precision	68	80	83	90	72
Multi-Limb Coordination	85	86	77	97	83

The production supervisors have informed you of two vacancies on the assembly line. Use the information you have analyzed in activities 1 and 2 in selecting two of the applicants. You will have to make your own decisions about how the information can be best used.

*FIRST CHOICE*__________

*SECOND CHOICE*__________

Explain why you choose these two applicants.

KEY TO FREQUENCY POLYGON ON PAGE 285.

Mistake # 1 - 89 score is improperly marked

Mistake # 2 - 92 score is improperly marked

Mistake # 3 - 102 score is improperly marked

You will note that this activity does not contain directions on how to select the best applicants, so you may expect a variety of answers. Encourage the students to make decisions on how they feel these test scores can best be used and to select applicants based on those decisions. Through a class examination of the various methods chosen to arrive at selections, the students will better understand the difficulties involved in using statistics as a basis for employee selection.

POSSIBLE METHODS OF APPLICANT SELECTION:

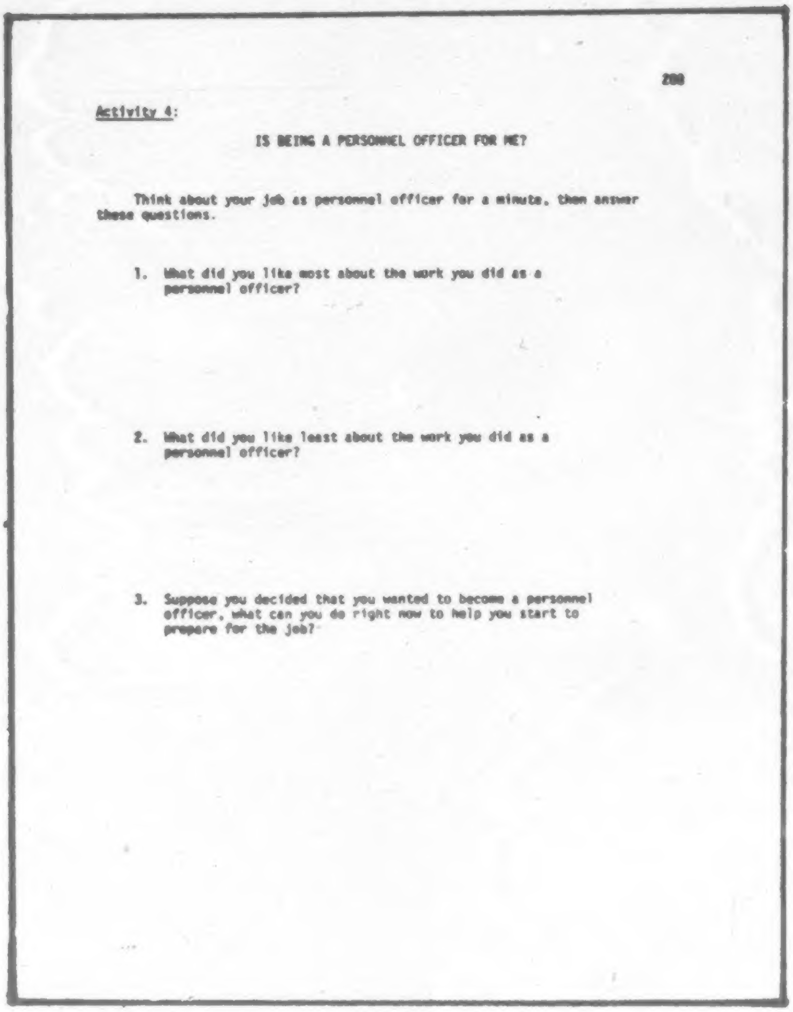
1. Add all mean scores, then add all applicant test scores. The two applicants with total scores closest to the sum of the mean scores are hired. *THE TOTAL MEAN SCORES ARE 355.1. APPLICANT # 2 (SCORE 346) AND APPLICANT # 5 (SCORE 346) ARE CLOSEST.*
2. Determine a range of acceptable scores; for example, two points above and below the mean. The two applicants with the most scores within that range will be hired. *APPLICANTS # 2 AND # 5 BOTH WITH THREE SCORES WITHIN THE RANGE WOULD BE SELECTED. THE OTHER APPLICANTS HAVE NO SCORES WITHIN THE RANGE.*

Examine as many student variations as time permits. As a class, evaluate the merits of each.

KEY - UNIT 14

IS BEING A PERSONNEL OFFICER FOR ME?

Activity 4:



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Activity 4:

IS BEING A PERSONNEL OFFICER FOR ME?

Think about your job as personnel officer for a minute, then answer these questions.

1. What did you like most about the work you did as a personnel officer?

2. What did you like least about the work you did as a personnel officer?

3. Suppose you decided that you wanted to become a personnel officer, what can you do right now to help you start to prepare for the job?

For questions # 1 and # 2:

1. Identify the various responses and the reasons for the responses.
2. Compare differing student responses and identify the reasons for the differences.

For question # 3:

1. Check with the guidance counselor about the educational requirements for personnel work and identify the classes you should take to meet the requirements.
2. Talk with a personnel officer about personnel work. Get a clear view of how you might fit in to that kind of job.

HOW A PERSONNEL OFFICER FOR A MANUFACTURING CONCERN USES MEASURES OF CENTRAL TENDENCY AS PREDICTORS OF JOB SUCCESS

A personnel officer is one of many office occupations that work behind the scenes to support the manufacturing industry.

Lisa Harmon is married and 42 years old. During her early childhood, she wanted to be a nurse but changed her mind in junior high school. She then made several career selections, first to be a teacher, then to work in a bank, and finally to work as a secretary. During high school Lisa completed several typing and business courses. When Lisa completed high school she married her steady boyfriend Rodney. Rod was just starting his second year of college and Lisa had to work to support them. Her first job was as a typist for Ford Motor Company. While the starting salary of her job was low, Lisa enjoyed working with people and knew that there was opportunity for promotion.

Her division of Ford wanted to train some of its present employees in personnel management. Since Lisa was completing her degree work in business and had completed several personnel courses, the company offered her a position as a personnel trainee. Lisa accepted the job and started her climb up a new career ladder. Within the next eighteen months she completed the personnel trainee program and was assigned the duties of an interviewer. Lisa completed work on her college degree in business and graduated with honors. During the next ten years she was promoted to assistant personnel officer.

To be a successful personnel officer requires a background in your company's business, a four year college degree, and an interest in business and people. Lisa says that you should take as many communication and writing courses as possible while in school and also complete the normal business, math, and management courses offered.

While working through this unit you will see how Lisa uses measures of central tendency, (mode, median, and mean), and frequency polygons to select employees that are best fitted for certain jobs.

Activity 1:

A personnel officer computes measures of central tendency.

As personnel officer for Ford Motor Company, Lisa has always had problems finding assembly line employees who will do a good job and who will stay with the company for a long time. Lisa thinks that she can solve this problem by identifying the common qualities of good employees now working for the company and then hiring job applicants who are most like them.

The production supervisors have identified the best workers on the assembly line. The personnel folders for these workers have been reviewed for intelligence and motor test scores.

Lisa has decided to examine the following characteristics of successful employees:

intelligence
response orientation
reaction time
control precision
multi-limb coordination

Intelligence Scores

The intelligence scores of the twenty-five workers are:

109, 87, 92, 93, 102, 85, 92, 93, 92
94, 92, 95, 92, 96, 91, 89, 91
90, 99, 91, 90, 88, 88, 94, 89

By looking at these scores, we see the highest is 109 and the lowest is 85. Thus, the range of scores is from 85 to 109. To help visualize these scores, the frequency table on the following page has been completed. Look carefully at how the numbers above were used in completing the table. An error has been made; find it before you go further.

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS
109	1	96	1
108		95	1
107		94	11
106		93	11
105		92	~~1111~~
104		91	111
103		90	11
102	1	89	1
101		88	11
100		87	1
99	1	86	
98		85	1
97			

MODE=____
MEDIAN=____
*MEAN=____

ERROR__________
____

*Round off to nearest whole number.

On pages 283 and 284 are the scores of the other four tests given to these same twenty-five workers. Build a frequency table for each set of scores in the space provided. Once you have finished, return to this page and complete the remaining problems.

FINDING THE MODE:

Look again at the frequency table above. Which intelligence score has the most tallies? This number is known as the mode (the most frequently occurring number in a group of numbers). Place your answer in the answer space marked MODE. Did you get 92? Once you are sure of how to find the mode, proceed to find the mode for each set of numbers on pages 283 and 284.

FINDING THE MEDIAN:

The median is the middle number in a group. Again, look at the frequency table above and find the middle (median) number. (Note: the answer you choose should have 12 numbers above it and 12 numbers below it.) If your answer is 92, you are correct. Place your answer in the space provided; then find the median for each frequency table on pages 283 and 284.

FINDING THE MEAN:

The average or mean of a set of numbers is found by adding all the numbers together, (including those that occur more than once) and then dividing their sum by the total numbers. For example, the total of the 25 intelligence scores is 2,314. If we divide this sum by 25 (2,314 ÷ 25), we obtain 92.56, the average or mean.

Compute the mean for the intelligence scores above and see if you get the same answer. Once you are sure that you know how to work this problem, go on to pages 283 and 284, and find the mean for each set of scores.

(Once you have found the mode, median, and mean, go on to Activity 2 on page 285).

Response Orientation Scores

Response orientation is the ability to select the appropriate response under the pressure of time. The response orientation scores for the twenty-five workers are:

10, 29, 11, 17, 12, 13, 22, 26, 17,
18, 24, 16, 19, 30, 11, 29, 27,
17, 27, 13, 14, 20, 17, 15, 16

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS

MODE= _____
MEDIAN= _____
*MEAN= _____

*Round off to nearest whole number.

Reaction Time Scores

Reaction time is the length of time to react to a specific stimulus. The response orientation scores for the twenty-five workers are:

64, 63, 64, 63, 74, 64, 63, 62, 61,
72, 61, 60, 68, 65, 80, 65, 76,
64, 66, 62, 66, 61, 70, 60, 64

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS

MODE= _____
MEDIAN= _____
*MEAN= _____

*Round off to nearest whole number.

Control Precision Scores

Control precision tests for the fine controlled movements. The control precision scores for the twenty-five workers are:

72, 89, 74, 89, 90, 76, 88, 78, 87,
81, 82, 87, 86, 87, 86, 83, 86,
84, 86, 84, 85, 86, 85, 86, 85

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS

MODE=_____
MEDIAN=_____
*MEAN=_____

*Round off to the nearest whole number.

Multi-limb Coordination Scores

Multi-limb coordination is how arm and/or leg movements work in unison. The multi-limb coordination scores for the twenty-five workers are:

77, 97, 98, 95, 84, 95, 95, 91, 96
93, 96, 94, 96, 99, 95, 81, 98,
97, 96, 96, 98, 98, 97, 97, 96

IQ SCORE	TALLY MARKS	IQ SCORE	TALLY MARKS

MODE=_____
MEDIAN=_____
*MEAN=_____

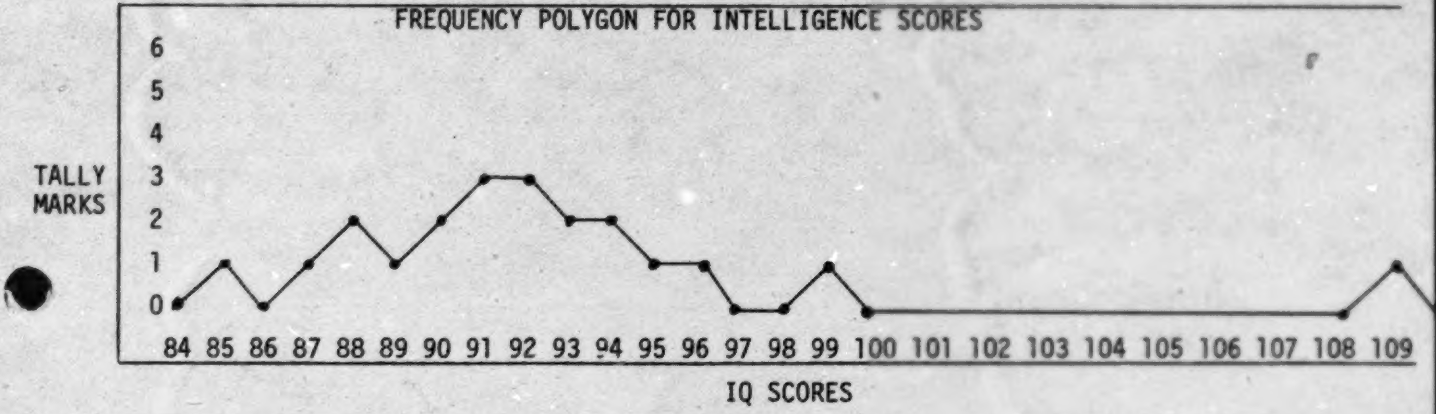
*Round off to the nearest whole number.

Activity 2

> A personnel officer converts frequency tables into frequency polygons in order to better visualize test scores.

Lisa finds that if she can represent the test scores in picture form, she can better see how the scores are distributed. Below is a frequency polygon (a broken line graph), which is used to visually represent the intelligence scores on page 282. Study this graph very carefully to see just how the intelligence scores were used to complete this graph. There are three errors in this graph; indicate the errors in the blanks and correct them on the graph.

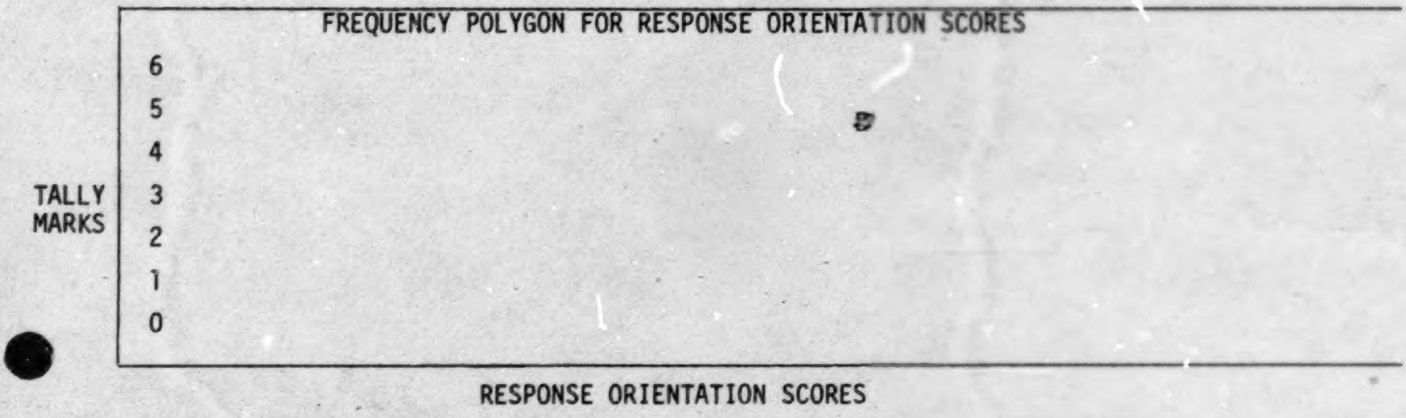
(You may find it helpful to detach the remaining pages of this unit while you complete this activity.)


FREQUENCY POLYGON FOR INTELLIGENCE SCORES

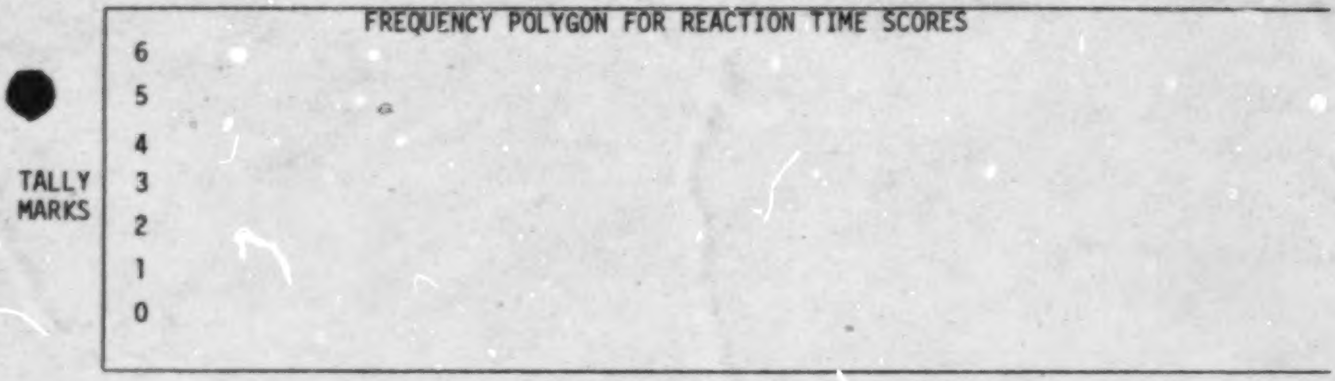
MISTAKE # 1: ____________ MISTAKE # 2: ____________ MISTAKE # 3: ____________

(Check your answers with the key on page 287.)

Are you sure that you know how a frequency polygon is constructed? If so, continue on and complete a frequency polygon for each of the four remaining sets of scores on pages 283 and 284.

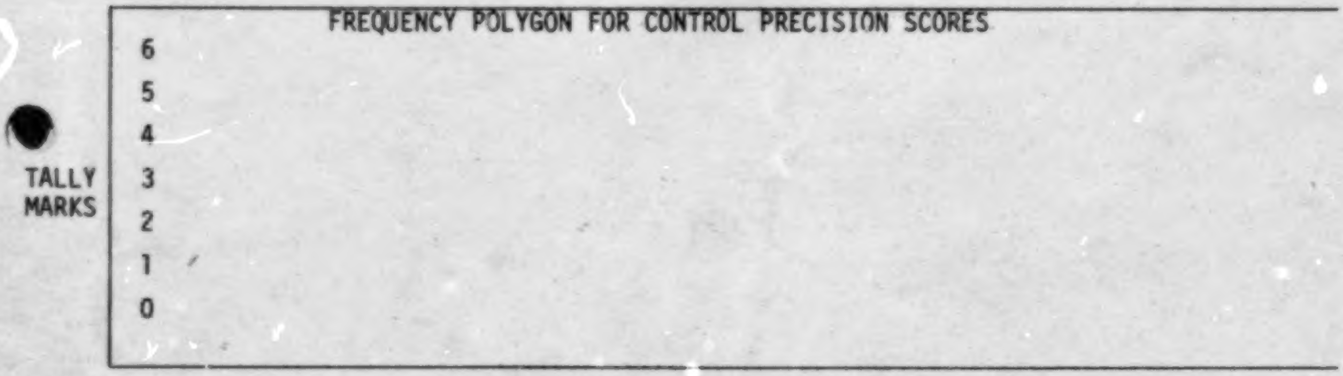

FREQUENCY POLYGON FOR RESPONSE ORIENTATION SCORES

FREQUENCY POLYGON FOR REACTION TIME SCORES



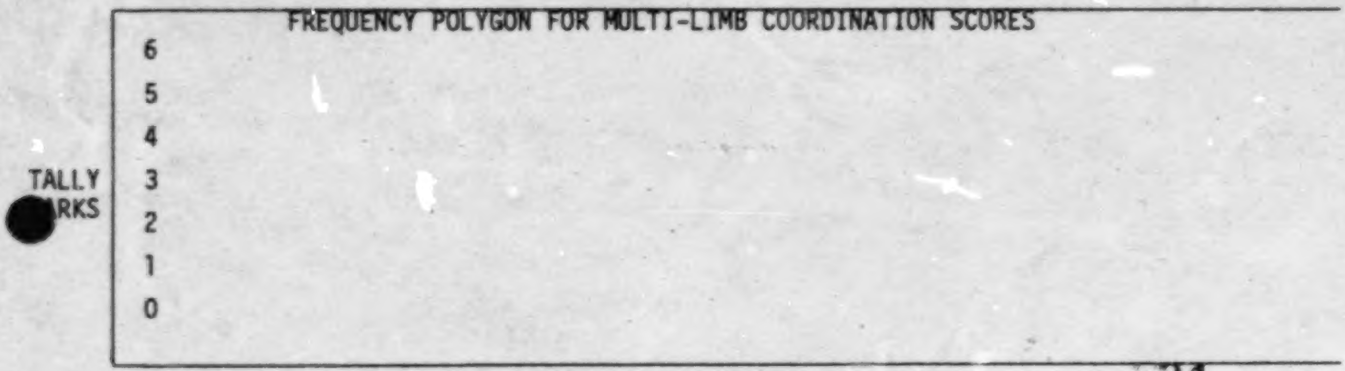
REACTION TIME SCORES

FREQUENCY POLYGON FOR CONTROL PRECISION SCORES



CONTROL PRECISION SCORES

FREQUENCY POLYGON FOR MULTI-LIMB COORDINATION SCORES



MULTI-LIMB COORDINATION SCORES

Activity 3:

A personnel officer selects qualified applicants for job vacancies.

Last week, five people applied for assembly line jobs. Information was gathered about their intelligence, response orientation, reaction time, control precision, multi-limb coordination. Below are their scores.

APPLICANT	*#1*	*#2*	*#3*	*#4*	*#5*
Intelligence	*78*	*92*	*119*	*85*	*93*
Response Orientation	*12*	*17*	*29*	*25*	*22*
Reaction Time	*78*	*62*	*60*	*80*	*66*
Control Precision	*68*	*80*	*92*	*90*	*72*
Multi-Limb Coordination	*85*	*95*	*77*	*97*	*93*

The production supervisors have informed you of two vacancies on the assembly line. Use the information you have analyzed in activities 1 and 2 in selecting two of the applicants. You will have to make your own decisions about how the information can be best used.

*FIRST CHOICE*____________

*SECOND CHOICE*___________

Explain why you choose these two applicants.

KEY TO FREQUENCY POLYGON ON PAGE 285.

Mistake # 1 - 89 score is improperly marked

Mistake # 2 - 92 score is improperly marked

Mistake # 3 - 102 score is improperly marked

Activity 4:

IS BEING A PERSONNEL OFFICER FOR ME?

Think about your job as personnel officer for a minute, then answer these questions.

1. What did you like most about the work you did as a personnel officer?

2. What did you like least about the work you did as a personnel officer?

3. Suppose you decided that you wanted to become a personnel officer, what can you do right now to help you start to prepare for the job?